Methodological Guidelines for Conducting a National Health Accounts Subanalysis for HIV/AIDS

June 2004

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Mission

Partners for Health Reformplus is USAID's flagship project for health policy and health system strengthening in developing and transitional countries. The five-year project (2000-2005) builds on the predecessor Partnerships for Health Reform Project, continuing PHR's focus on health policy, financing, and organization, with new emphasis on community participation, infectious disease surveillance, and information systems that support the management and delivery of appropriate health services. PHRplus will focus on the following results:

- *Implementation of appropriate health system reform.*
- *Generation of new financing for health care, as well as more effective use of existing funds.*
- *Design and implementation of health information systems for disease surveillance.*
- *Delivery of quality services by health workers.*
- *Availability and appropriate use of health commodities.*

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Abstract

The National Health Accounts (NHA) framework, an internationally accepted tool that provides a comprehensive estimate of national health expenditures, has been adapted to enable "subanalyses" that can be used to capture data on specific diseases, such as HIV/AIDS, by breaking down expenditures on related individual services and disease areas. These guidelines describe the approach used by Partners for Health Reform*plus* to conduct an HIV/AIDS subanalysis within the context of a general NHA exercise in low- and middle-income countries. It discusses definitions and boundaries of HIV/AIDS expenditures, suggests a NHA classification system adapted to HIV/AIDS, describes the data collection process for capturing HIV/AIDS spending, and addresses the specific issues of survey development to track for household spending on HIV/AIDS. Like the NHA methodology, the subanalysis framework aims to offer an approach that provides both international comparability and national flexibility in tracking HIV/AIDS health care spending.

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Acronyms

ARV	Antiretroviral
HH	Household
ICHA	International Classification of Health Accounts
IDU	Injecting Drug Users
IEC	Information, Education, and Communication
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
NGO	Nongovernmental Organizations
NHA	National Health Accounts
NHE	National Health Expenditures
OECD	Organization for Economic Cooperation and Development
OI	Opportunistic Infections
OOP	Out-of-Pocket
PEP	Post Exposure Prophylaxis
PHR*plus*	Partners for Health Reform*plus*
PLWHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother-to-Child Transmission
SHA	System of Health Accounts
STI	Sexually Transmitted Infections
SWAp	Sector-Wide Approaches
TB	Tuberculosis
THAE	Total HIV/AIDS Expenditures
THE	Total Health Expenditures
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

Acknowledgments

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This report also has benefited from important contributions from the governments of Rwanda, Kenya, and Zambia, in particular their Ministries of Health, which where the NHA HIV/AIDS methodology was first implemented. The authors are grateful for their feedback, as well as for the comments of numerous NHA and HIV experts at various regional training workshops, including those that took place in East, Central, and Southern Africa, Latin America and the Caribbean, and Central Asia.

This report has undergone substantial changes and revisions from its first draft (January 2003), in order to incorporate the numerous lessons learned from implementation of the methodology in various countries. A.K. Nandakumar and Gilbert Kombe were involved in the conceptualization of earlier drafts (along with the other co-authors). Completion of the report and incorporation of lessons learned was done by Susna De, Tania Dmytraczenko, Catherine Chanfreau, and Marie Tien.

Finally, the authors extend thanks to colleagues at PHR*plus* for the valuable advice they provided during various stages of this work. We are grateful for inputs received from Owen Smith, Pia Schneider, K.P. Srinath, Ken Carlson, Manjiri Bhawalkar, Janet Edmond, and Roselyn Ramos.

1. Introduction

1.1 Overview

Many low- and middle-income countries are challenged to accurately determine and appropriately finance the increasing demands for health care in their countries. Unfortunately, many are also pressured to expand health care services to address a growing burden of disease with unreliable, limited, and often declining sources of public financing. In many countries, this situation is exacerbated by the demands placed by HIV/AIDS on health systems to keep pace with the advancing pandemic to deliver care while reaching marginalized groups engaged in high-risk behaviors to protect them from infection. Given the need to scale up comprehensive packages of HIV prevention, care, and treatment, governments have proposed comprehensive national policies and strategies intended to remove barriers to access to HIV/AIDS prevention, care, and treatment services.

As countries frame comprehensive HIV responses, the need to understand resource needs, prioritize and allocate available resources, and appropriately qualify for additional resources becomes pronounced. In response, many countries explore alternative ways to allocate resources efficiently and effectively to prevent spread of the virus, treat those who have the disease, and mitigate the impact of the pandemic.

However, optimal resource allocation demands comprehensive information on national HIV/AIDS-related expenditures and program reach. Unfortunately, many countries lack appropriate data needed to inform allocation decisions – including the amount spent by households and individuals for HIV prevention and care services. Clarifying expenditures and resource needs builds an understanding of the burdens placed on health systems, specific programs, individuals, and households. In addition, improved information on resources can influence opportunities to reach scale by clarifying the extent to which HIV/AIDS responses reach populations in need – particularly for hard-to-reach populations.

To meet these needs, global initiatives, national governments, and local organizations have mobilized to increase the envelope of resources available to advance the global response to HIV/AIDS. As a result, dramatic levels of funding are now available to finance HIV programs from a growing number of international sources such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, the U.S. government's President's Emergency Plan for AIDS Relief (PEPFAR), the World Health Organization 3 by 5 Initiative, and the World Bank's Multi-Country HIV/AIDS Program (MAP), in addition to private sector contributions from commercial companies and private foundations, which have dramatically increased over the past two years. With these increases in resource levels and diversity comes an increased call for accountability, demonstration of program impact, and clarity in resource allocation and expenditure – further reinforcing the need for improved program information.

As resources are mobilized to support HIV services, concerns are raised regarding the management requirements placed upon countries and organizations that receive the financing: Will they be able to allocate these resources toward the most effective HIV/AIDS interventions and to

measure the impact of the additional funding on reversing the momentum of HIV/AIDS? Will they be able to track resources in a way that promotes transparency and accountability? Will these efforts succeed in avoiding the displacement or reduction in resources meant for other diseases?

Financial indicators to track resource use and link it to health outcomes are an integral component of a monitoring and evaluation strategy to support policy decisions that are evidence-based and lead to the selection and development of interventions that achieve desired results. Financial tracking is a cornerstone of sound management and a key ingredient in measuring accountability. While including financial indicators may appear to add to the administrative burden placed on health systems already strained to respond to the HIV/AIDS emergency, it is essential that monitoring and evaluation strategies that include financial indicators place minimal additional burden upon these systems. Therefore, it is highly desirable to use routine information sources (such as government and donor budget and expenditure data; public expenditure reviews; routine surveys) to track the use of HIV/AIDS resources.

One potential tool is National Health Accounts (NHA) and related subanalysis of HIV-related information. Implemented in more than 60 middle- and low-income countries, NHA is an internationally recognized framework for measuring total (public, private, and donor) health expenditures in a given country. NHA methodology tracks the flow of funds through the health sector, from their sources, through financial institutions, to providers and functions. In addition to illustrating total national health care spending patterns, the NHA methodology can be used to capture data on a specific disease area by conducting a subanalysis to break down expenditures on individual services and disease areas (such as HIV/AIDS interventions). Subanalyses have been conducted in more than 20 countries.

The NHA framework is particularly useful in clarifying resource expenditures in HIV/AIDS because it provides data that are sufficiently disaggregated to allow performance assessment by HIV service area (e.g., voluntary counseling and testing [VCT], antiretroviral therapy [ARV], and prevention of mother-to-child transmission [PMCT]). Further, because disease specific sub-accounts such as HIV/AIDS are frequently implemented within the context of broader sector-wide NHA, the tool is well-suited to measure additionality – the concept that assistance made through the Global Fund "not replace or reduce other sources of funding, either those to fight against AIDS, tuberculosis and malaria or those that support public health more broadly." Several mechanisms of donor assistance also incorporate the concept of additionality, though perhaps not as explicitly as the Global Fund. NHA offers an inclusive approach that relies primarily on existing sources of information and secondly, on primary data collection to fill identified data gaps. Increasingly, NHA is becoming institutionalized in many countries and conducted on a routine basis that could provide meaningful baseline and trend data to assess progress toward national priorities as well as goals of various global initiatives.

1.2 Purpose

The purpose of this guide is to describe the approach used by Partners for Health Reform*plus* (PHR*plus*) for conducting HIV/AIDS subanalysis within the context of a general NHA exercise in low- and middle-income countries. This framework is first step in the development of internationally comparable disease-specific subanalyses in the context of a sector-wide, general NHA. This document will not focus on HIV/AIDS subanalysis implemented as a stand-alone exercise.

The intended audience for this guide is PHR*plus* staff and counterparts who are familiar with NHA concepts and framework and have an understanding of the conceptual and practical information

necessary to conduct a general NHA in a country detailed in accordance with the *Guide to Producing National Health Accounts,* also known as the *Producers' Guide* (World Health Organization, World Bank, and United States Agency for International Dev elopement 2003).[1]

This document defines and sets the boundaries of HIV/AIDS expenditures, suggests a NHA classification adapted for HIV/AIDS, discusses data collection to capture HIV/AIDS spending, and addresses the specific issues of survey development to track for household spending on HIV/AIDS. Based on PHR*plus'* extensive country-level experience, primary data collection for NHA HIV/AIDS subanalysis will be tailored to the state the HIV/AIDS epidemic has reached in the country and to individual country situations.

PHR*plus* recommends that, whenever possible, disease-specific subanalyses be done within the context of a general, sector-wide NHA estimation. The reason is that much information on HIV/AIDS can be obtained from the primary and secondary data collection done in the course of a general NHA estimation, which also helps to place a country's HIV/AIDS spending patterns within the context of overall health spending.

This guide takes advantage of the work and in-country experience on NHA subanalysis for HIV/AIDS developed by the PHR*plus* project as well as consultation with HIV/AIDS and NHA experts in countries in sub-Saharan Africa, the Commonwealth of Independent States, and the Latin America and Caribbean region. This document is a work in progress, and PHR*plus* staff welcome comments and feedback from experts and practitioners in the field.

This approach uses internationally endorsed HIV/AIDS definitions in the area of HIV/AIDS surveillance and programmatic responses and is compatible with the International Statistical Classification of Diseases and Related Health Problems (ICD-10) when linking expenditures on HIV/AIDS to disease's progression.

1.3 Concept of NHA

National Health Accounts is an internationally accepted tool that provides a comprehensive estimate of national health expenditures. It captures and examines a nation's use of public, private (including households), and donor funds. NHA organizes and tracks the flow of funds from one health care dimension to another starting from the source to the end user. For instance, it can demonstrate the allocation of funds from the Ministry of Health (MoH) to a government health provider and present the type of services the provider offers. The purpose of NHA is to influence policy through its use by policymakers who can make evidence-based decisions. NHA can also be used as a monitoring and evaluation tool to track changes in policy and allocation of resources.

Under the NHA methodology, health expenditure data are presented in a series of standard tables that can be easily understood, not only by policymakers, but also by donors and other stakeholders. The NHA tool is endorsed by several international organizations such as the World Health Organization (WHO), the World Bank, the Swedish International Cooperation Agency, and the United States Agency for International Development (USAID).

[1] Please also refer to *A System of Health Accounts* (Organization for Economic Cooperation and Development [OECD] 2000).

As combating the AIDS epidemic became a leading policy priority in many countries, there was increased demand for data on the amount and distribution of resources being allocated to prevent and treat the disease and, consequently, the NHA methodology was adapted to fulfill this data need. The methodology also can and has been applied to track other disease-specific expenditures. Availability of reliable information on expenditures by disease categories allows for tracking allocations to specific burden of disease categories, taking us one step closer to linking expenditures to outcomes.

1.4 Outline of the Approach to the HIV/AIDS Subanalysis

The PHR*plus* project recommends pursuing a methodological approach that adheres closely to the *Guide to Producing National Health Accounts*. This approach allows for international comparability while, at the same time, country flexibility to tailor the subanalysis to address national policy priorities and its state of the epidemic.

In comparison to general National Health Accounts, disease-specific subanalyses have added complexities in terms of boundaries and definitions. Country financial systems rarely track expenditures by disease, and consequently, the subanalysis team is tasked with defining the types of expenditures that should be included and excluded from the subanalysis. For example, the team may need to determine how to handle co-morbidity expenditures or those associated with both HIV/AIDS and other diseases or services – i.e., should condom program expenditures be included in the HIV/AIDS subanalysis even if their primary purpose is to address family planning issues? These boundary issues are discussed in more detail in Chapter 2.

The presentation of HIV/AIDS health expenditures can be done in the general NHA format, which is a series of two dimensional tables illustrating the flow of funds between at least four principal health care dimensions, namely 1) "financing sources" of HIV/AIDS services, 2) the principal managers or "financing agents" of HIV funds, 3) the end users or "providers" and 4) finally, the end uses or "functions" of HIV monies. Examples of these tables are presented and discussed in Chapter 3.

Once the boundaries of the subanalysis are determined, the next step for the NHA team is to determine how to classify these expenditures. The classification approach recommended by PHR*plus* is adapted from that described in the *Producers' Guide*, which is derived from the System of Health Accounts (SHA) classification scheme. The classifications that are chosen for the subanalysis form the row and column headings of the NHA tables and are detailed in Chapter 4.

The HIV subanalysis requires additional data collection to determine allocation factors and to capture expenditure information that is not available from secondary sources. Much of this can be done within the data collection process for the general NHA. Generally speaking, country subanalyses will at a minimum need primary data on expenditures by people living with HIV/AIDS (PLWHA). Chapter 5 provides a discussion on the types of data needed for the subanalysis and how these data may be obtained based.

Conducting surveys on PLWHA should be done with caution and careful preparation. In this regard, the country subanalysis team should respect certain guidelines and ethical principles, outlined by UNAIDS, while implementing surveys involving human subjects. A review of ethical considerations is featured in Chapter 5.

In terms of the general process of implementing a subanalysis, these guidelines emphasize the need to institutionalize data collection process and to foster policy use of the NHA findings. To this

end, it is recommended that potential users of the information be involved in a steering committee to guide the development of a policy-relevant NHA HIV expenditure review. Chapter 6 further discusses the composition of the steering committee, the subanalysis team, and a general timeline of activities.

2. Definitions and Boundaries of HIV/AIDS

This chapter describes definitions and boundaries of HIV/AIDS health expenditures. Definitions describe the meaning of a concept as used by NHA. For example: What is a health expenditure? Who is considered as "living with AIDS"? Boundaries demarcate what is considered within a definitional category. For example, if the citizen of a country doing a NHA estimation makes a health expenditure in another country, is that expenditure counted in his own country's NHA?

The need for boundaries for general health or disease-specific expenditures are based on the premise that, while it is appropriate to adapt the basic classification system (specifically, the International Classification of Health Accounts, or ICHA) to accommodate expenditure categories unique to a country, the basic ICHA should be adhered to first, in order to maintain uniformity and standardization.

The definitions and boundaries discussed below were based on discussions at NHA Training Workshops in East, Central, and Southern Africa and the Latin America region; in work with people doing the HIV/AIDS subanalysis in Rwanda, Kenya, and Zambia; and with input from NHA and HIV/AIDS experts.

2.1 Definition of HIV/AIDS Health Care Expenditure

In line with the general NHA approach, the subanalysis uses a *functional* approach to defining HIV/AIDS health care spending. Thus, HIV/AIDS health care expenditures are expenditures on those activities that are 1) primarily intended to have impact on the health status of people living with HIV/AIDS in a given period of time, and 2) intended to prevent the spread of HIV/AIDS, which may target the population at large (e.g., recipients of condom distribution programs intended to curb the spread of HIV/AIDS). Expenditures are included or not based on the nature of the expenditure itself, regardless of the care provider or the institution making the expenditure. For example, spending by the Ministry of Education on teaching hospitals or by the Ministry of Justice on health care for prison inmates are included in NHA total health expenditure estimates.

2.2 Definition of People Living with HIV/AIDS

This subanalysis targets health care expenditures by and/or for those people who are infected with HIV, namely people living with HIV/AIDS.

To ensure rigor in the estimate as well as international comparability, the methodology for the HIV/AIDS subanalysis recommends clearly defining how an individual has been identified as living with HIV/AIDS. The tighter the criteria used to define an individual as infected by HIV are, the better. At the same time, experience has proven that the definition used must be tailored to the country's ability to provide HIV testing to its population as well as to the epidemic state of the country.

Ideally, individuals whose health care expenditures are targeted in this subanalysis are those who have been tested positive for HIV, with a confirmation test. However, such information may not always be available. Recognizing the lack of testing in some regions of the world, the NHA HIV/AIDS subanalysis allows for flexibility, while adhering to the internationally endorsed definitions of HIV/AIDS used for surveillance purposes.

In countries or among subpopulations in which HIV prevalence is more than 10 percent, a single HIV test is usually considered efficient for surveillance purposes (UNAIDS and WHO 2004). In such a context, individuals whose health care expenditures are targeted in the NHA subanalysis for HIV/AIDS are *those who have been tested positive for HIV using a single HIV test and/or those who have been tested positive for HIV using a confirmation test.*

In developing countries, the lack of availability of HIV testing may necessitate using a symptom-based definition to consider an individual as living with AIDS. That is, in certain limited situations, for the purpose of the NHA subanalysis for HIV/AIDS, the definition of AIDS status will include diagnosed conditions. The World Health Organization Clinical AIDS Case Definition for Use in Africa, which is widely used for surveillance purposes, will be applied to classify an individual as an individual living with HIV/AIDS. (The WHO case definition is in Annex A.)

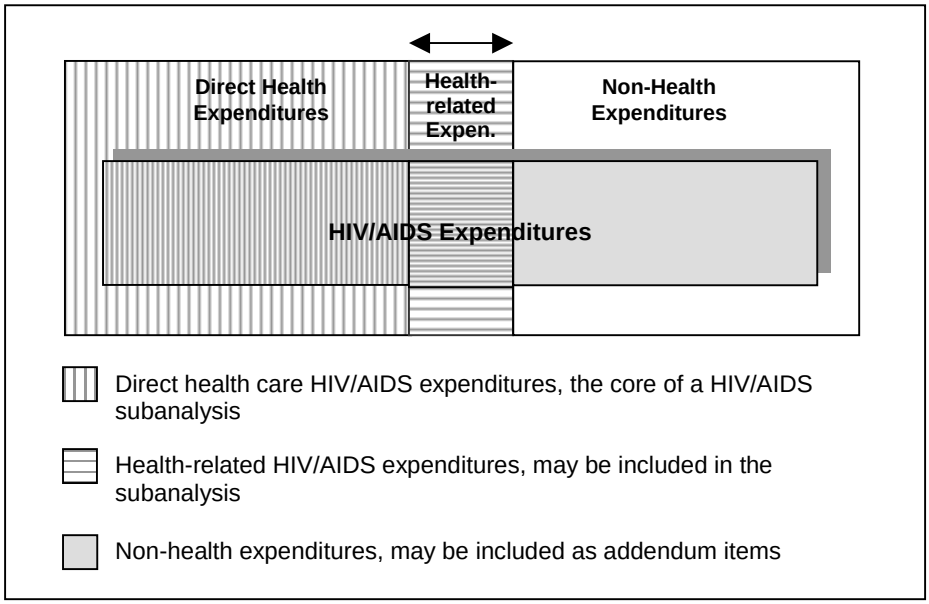
In this context, the NHA subanalysis for HIV/AIDS will look at two types of individuals classified as infected with HIV: individuals who fall within the symptom-based WHO AIDS Case Definition and those diagnosed HIV sero-positive using a test for antibodies. Type-with-type comparisons may have to be made during the data analysis to ensure no significant difference exists between the two groups.

2.3 Boundary of HIV/AIDS Subanalysis

As discussed in general NHA terms above, a boundary demarcates limits for what is counted in an NHA analysis; in the current case, an HIV/AIDS boundary outlines the limits of what is captured in an HIV/AIDS subanalysis.

The NHA subanalysis does not include all services mentioned in the continuum of care for HIV/AIDS. This continuum is known by HIV/AIDS experts to encompass both the provision of health care and non-medical activities. The core of the subanalysis, in keeping with the NHA approach, includes those expenditures on *health care* activities/services (see Figure 1). Nevertheless, this paper proposes strategies for incorporating non-health care activities while at the same time maintaining the integrity of the health accounts framework (to be described in Section 2.4).

Figure 1: Expenditure Boundaries of a NHA HIV/AIDS Subanalysis



2.3.1 Space Boundaries

The space boundary for an HIV/AIDS subanalysis is not limited to expenditures within the borders of the country doing a subanalysis. For example, a subanalysis will include health expenditures made by its citizens abroad, and, conversely, will exclude expenditures of foreigners temporarily within its borders.

2.3.2 Time Boundaries

Particular attention should be paid to the time boundary of a NHA subanalysis, because some governments and organizations report expenditures by calendar year while others report by fiscal year. The subanalysis therefore must clearly demarcate the time period it covers.

Another time-related issue to be considered is when a service or activity takes place or an item procured vis à vis when the payment is made for the service, activity, or item. NHA uses the accrual method of accounting, which means goods and services are accounted for in the same year they were provided, rather than when they are actually paid for.

A subanalysis includes HIV/AIDS expenditures for those who pass away during the year of estimation.

Table 1 looks at definitions and boundaries.

Table 1: Functional Definition and Boundaries by HIV/AIDS Activity

Criteria	Boundaries	Obstacles
Space	Includes direct health and health-related payments made by a country's citizens and residents living with HIV/AIDS while they are traveling abroad Excludes HIV/AIDS expenditures by foreigners in the country doing the subanalysis. (Their expenditures usually are not relevant to policy.) Includes donor spending (both cash and in-kind) whose primary purpose is the production of health and health- related goods and services in a country	Difficult to conduct household survey that is representative of individuals living with HIV/AIDS when many of these people are traveling abroad Donor spending on the planning and administration of such health care assistance
Monetary unit	All foreign monetary units are converted into local currency. Later, NHA results are expressed in U.S. dollars. For international comparisons over time, it is often useful to express results in US dollars but purchasing power parity (PPP) needs to be considered in the analysis.	
People living with HIV/AIDS	Individuals tested positive for HIV Or Individuals considered as people living with AIDS according to WHO case definition for AIDS surveillance	Generally mandates primary data collection targeting people living with HIV/AIDS. Does not generally include children living with HIV/AIDS
Prevention activities	Estimated annual preventive care expenditures reported by MoH, donors, and others Excludes household payments made to attend information campaigns and buy prophylactics such as condoms	Surveys among PLWHA do not allow extrapolation for preventive care expenditures, mainly because patients do not have any, as they do not often use prophylactics HIV-integrated programs funded by other ministries, such as MoE or MoJ, are difficult to track
Diagnostics	Includes estimated expenditures for lab-tests and x-rays Lab and radio for opportunistic infections	
Therapies	Includes all ARV treatment, and treatment related to OI. Excluding expenditures reported by government 's TB program, which also may benefit HIV-positive patients who are detected for TB.	In case of a joint management of TB and HIV, breaking down expenditures by disease category for HIV-infected TB cases might be difficult

2.4 HIV/AIDS Expenditures

The NHA framework establishes boundaries of spending on direct versus health-related HIV/AIDS activities. *Direct* expenses are those primarily or entirely associated with health care. A *health-related* HIV/AIDS activity may have to do with health but overlap with other disciplines such as education, overall "social" expenditure, and research and development. These activities may be closely linked to health care in terms of operations, institutions, and personnel, but should, to the extent possible, be excluded when measuring activities belonging to direct health care functions.

While *non-health* expenditures lie outside the realm of the NHA framework, this paper proposes that non-health HIV/AIDS spending can be included as *addendum* items, supplemental to the main subanalysis on health expenditures for HIV/AIDS.

2.4.1 Direct Health Care Expenditures

Direct health care HIV/AIDS activities are considered the core of an HIV/AIDS health subanalysis. Countries implementing the subanalysis attempt to track these expenditures at a minimum. Activities included within the boundary of direct health care are as follows:

- HIV/AIDS prevention activities
  - Programs for sexually transmitted infections (STIs)
  - Condom promotion
  - Community-based distribution programs and social marketing outlets
  - Voluntary counseling and testing (non-HIV-infected and HIV-infected)
  - Prevention of mother-to-child transmission
  - Post exposure prophylaxis
  - Blood safety
  - Information education, communication campaigns, behavior change interventions
- Treatment and diagnostic services for HIV case management
  - ARV treatment and monitoring
  - Treatment and monitoring of main opportunistic infections (OIs).[2] This includes but is not limited to:
    - Cryptococcosis Meningitis
    - Candidiasis (oral/oesophageal)
    - Pneumocystis Carinii Pneumonia
    - Tuberculosis (TB)
    - Kaposi's Sarcoma
    - Toxoplasmosis
- Administration of HIV/AIDS services, such as for the following programs
  - Prevention, monitoring, and treatment activities for HIV/AIDS and OIs
  - Social Security

[2] The distribution of OIs varies widely by country. In most low-resource countries, TB is a leading HIV-associated OI. PHR*plus* has found that, because most OIs are closely associated with HIV/AIDS, it is extremely difficult and time-consuming to disaggregate HIV/AIDS from OI expenditures.

- Private Insurance – HIV/AIDS expenses incurred by private insurance will be difficult to separate from general expenses paid for services incurred. It may be possible to do so depending on how companies record their line item expenditures.

- Care and support activities
  - Nongovernmental organizations (NGOs), community-based organizations, and private households for home-based palliative care

2.4.2 Health Care-Related HIV/AIDS Expenditures

As noted in the introduction to this section, health care-related activities contribute to health, but are non-medical and/or intersect with other disciplines.

- Mitigation activities
  - E.g., nutritional support for populations receiving ARV treatment
- Training and support services
  - Education and training of health personnel on, for example, protocols for VCT, ARV management and treatment, STI management, health education, PMTCT treatment, OI monitoring and treatment, counseling and psychosocial support
  - Operational research and development
- Capital formation for provider institutions (although capital formation is classified as health-related, it would be included in the total health expenditure [THE] estimate, per NHA rules)
  - Lab facilities
  - Drug supply and storage systems

2.4.3 Non-Health Care Expenditures

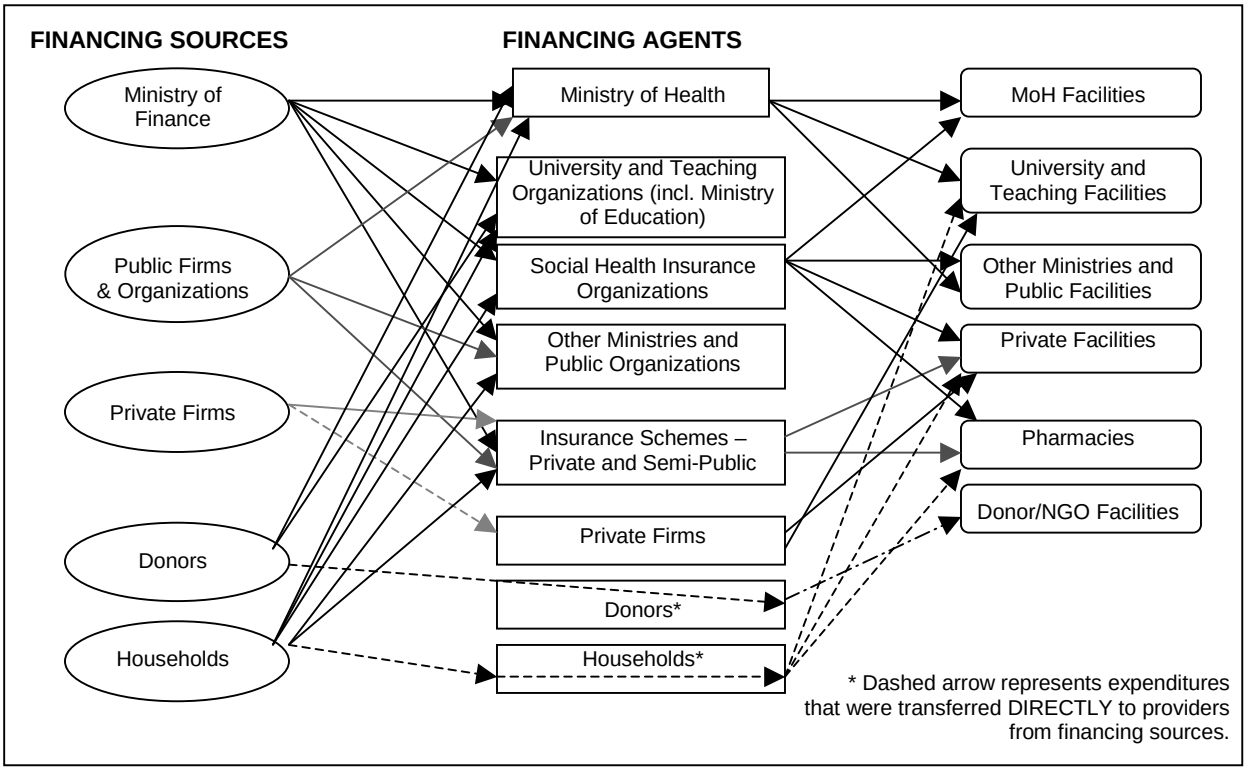
As stated earlier, the core of the NHA subanalysis tracks those HIV/AIDS expenditures that are associated with health care. Inclusion of non-health activities would dilute the findings of what is intended to be a *health* expenditures exercise. However, because a multi-sectoral approach is encouraged in the effort to curb the spread of HIV/AIDS, some non-health expenditures – while maintaining the overall integrity of the health accounts – may be included as addendum items. An example of such an expenditure is a program to mitigate the stigma associated with HIV/AIDS. Addendum items are placed below the general NHA matrices and not included in the total estimate that is used for country comparison purposes.

Another reason for listing these expenditures separately is the difficulty of capturing them: They would be relatively easy to track if they were included as line items in public and donor records. But many of them are financial contributions to HIV/AIDS care that go through mechanisms such as the family members of recipients of health care, churches, law firms that advocate for PLWHA, and orphanages; these entities may not be accessed for information, or they may be reluctant to share information about their sources and allocation of fund. Also, because NHA measures market production, opportunity costs (for example, the uncompensated time of someone who stays home to care for a sick family member) may not be captured. Missing these data results in a great underestimation of what is being spent.

3. HIV/AIDS Subanalysis Tables

The flow of HIV/AIDS funds through the health system can involve numerous pathways and many health sector entities. Figure 2 offers a visual illustration of this complicated flow:

Figure 2: Flow of Funds through Health System



3.1 NHA Tables

National Health Accounts organizes the flow of funds and their amounts in a clear and easy-to-follow tabular format. These NHA tables present the flow of funds as occurring between four principle health care "dimensions"– financing sources, financing agents, providers, and functions.

Financing Sources are entities that provide the funds for health care. Entities that may fall within this dimension include the Ministry of Finance (MoF), donors, and households.

Financing Agents receive funds from sources and use them to pay for/purchase health services. Examples include Ministry of Health and insurance companies etc.

Providers are the end users/institutions of health funds. They *deliver* the health service. Examples include private and public hospitals.

Functions refer to the health services and medical goods that providers deliver. Categories of functions include curative care, long-term nursing care, medical goods such as such as prescribed medicines, and administration.

Figure 3 shows how the flow of funds is presented within and between NHA tables.

Figure 3: NHA Tables

	Primary Sources				
Financing Agents	S.1 **Ministry of Finance**	S.3 **Donors**	**S.2.1 Employers**	**S.2.2 Households**	
HF.1.1.1.1 **Ministry of Health**	A	B			**A+B**
HF.1..11.2 **Ministry of Education**	C				**C**
HF.2.2 **Insurers**		D	E		**D+E**
H.F.2.3 **Households (out-of-pocket)**				F*	**F***
TOTALS	**A+C**	**B+D**	**E**	**F**	**G**

** direct transfer of payment*

	Financing Agents				
Providers	HF.1.1.1.1 **MoH**	HF.1.1.1.2 **MoE**	HF.2.2 **Insurers**	HF.2.3 **Households**	
HP.1.1.1 **Public Hospitals**	W		X		**W+X**
HP.1.1.2 **Private Hospitals**		C			**C**
HP.3.4.6 **Public Clinics**			Y		**Y**
TOTALS	**W=A+B**	**C**	**X+Y=D+E**	**F**	**G**

Within a NHA table, the funds flow downward from the "originators" listed in each column heading to the "recipients" listed in the row headings. In table 1 of Figure 3, one can see that the Ministry of Finance transfers $A to the Ministry of Health and $C to the Ministry of Education. The total amount spent by each "originator" is shown at the bottom of each column. The total amount received by each "recipient" is included at the end of each row.

NHA tables are also linked to each other as they trace the flow of funds between each of the health care dimensions. As shown in tables 1 and 2 (Figure 3), the row headings (recipients) of one table become the column heading (originators) of the next table. For example, table 1 shows that the MoF distributes its funds to the MoH and MoE and table 2 shows that the MoH and MoE distribute their funds to providers. Individual health expenditures must be carefully tracked through all the tables, so the total national health expenditure – the number contained at the bottom right cell of each table – is the same in every table.

3.2 NHA Tables as Applied to HIV/AIDS

PHR*plus* recommends that countries compile their HIV/AIDS expenditure information according to the traditional NHA format.

The following pages show the four main NHA tables.

- Table 2 shows the transfer of HIV/AIDS health funds from *financing sources to financing agents*
- Table 3 shows the transfer of HIV/AIDS health funds from *financing agents to providers*
- Table 4 shows the transfer of HIV/AIDS health funds from *financing agents to functions*
- Table 5 shows the transfer of HIV/AIDS health funds from *providers to functions*

Depending on the level of inclusion of direct, health care-related, and non-health HIV/AIDS spending, three possible types of expenditure "totals" may be estimated. Table 4 shows the NHA table format in the HIV/AIDS context and includes the three possible estimates for totals that countries may choose to measure.

Total Health Expenditure (THE) on HIV/AIDS services: This estimate should be made at a minimum and will be the principal means for comparisons across countries. It includes spending on direct health care activities as well as those related to capital formation.

National Health Expenditure (NHE) on HIV/AIDS services: This total expenditure estimate may include health-related spending in addition to that captured under THE. National health expenditures reflect the *national* policy preferences for what is to be included as a "health" HIV/AIDS expense.

Total HIV/AIDS Expenditure (THAE): This new estimate, proposed in this methodology, includes both health and non-health expenditures on HIV/AIDS services and caters to the multi-sectoral approach to curbing the disease epidemic.

Tables 2, 3, and 5 are actual country examples of the four HIV/AIDS subanalysis tables.

Table 2: Financing Sources x Financing Agents (FS X HF)

Code	Financing Agent (HF)	Financing Source (FS)							
		FS.1 Public Funds			FS.2 Private Funds		FS.3 RoW		
		FS.1.1.1 Central govt revenue	FS.1.1.2 Regional and munic. govt revenue (local uuthorities)	FS.2.1.1 Parastatals	FS2.1 .2 Private companies	FS.2.2 Households	FS.3 Rest of the world	Not specified by any kind	Row total
HF. 1.1.1.1	MoH	594,706,299					2,951,376,712		3,546,083,011
HF. 1.1.1.3.1	Office of the president-NACC	25,013,331							25,013,331
HF.1.1.2	State/provincial govt (local authorities)**	1,029,480	4,117,922						5,147,402
HF.1.2	Social Security funds (NHIF)					211,096,852			211,096,852
HF.2.5.1	Parastatals			3,134,925					3,134,925
HF.2.3	Household out-of-pocket payments					3,008,136,341			3,008,136,341
HF.2.4.1	NPISH (incl. NGOs)						959,882,626		959,882,626
HF.2.5	Private firms and corporations				22,614,509				22,614,509
	Not specified by any kind							8,322,809	8,322,809
	Column Total (THE)	620,749,110	4,117,922	3,134,925	22,614,509	3,219,233,193	3,911,259,338	8,322,809	**7,789,431,806**

Table 3: Financing Agents x Providers (HF X HP)

Code	Provider (HP)	Financing Agents (HF)									
		HF.1.1.1.1	HF.1.1.1.3.1	HF.1.1.2	HF.1.2	HF.2.5.1	HF.2.3	HF.2.4.1	HF.2.5		
		MoH	Office of the president-NACC	State/ provincial govt (local authorities)**	Social Security funds (NHIF)	Parastatals	Household out-of-pocket payments	NPISH (incl. NGOs)	Private firms and corporations	Not specified by any kind	Row total
HP. 1.1.1	Govt. hospitals	580,106,299		2,593,542	145,445,731		1,717,521,520	296,864,338			2,742,531,430
HP. 1.1.2	Private for-profit hospitals				49,607,760		334,713,767		13,007,661		397,329,188
	Private for non-profit hospitals			253,000	16,043,361		408,614,556	52,969,113			477,880,029
HP.3.1-3.3	Office of physician, dentists, nurses, clinical officers, etc.			-			104,976,032		9,606,848		114,582,879
HP.3.4.5.1	Govt. health centers and dispensaries			1,937,465		2,610,116	34,920,045	33,567,074			73,034,700
HP.3.4.5.2+	Private non-profit health centers and dispensaries			-			41,763,686	24,790,187			66,553,873
HP/3.9.3	Alternative or traditional practitioners (traditional healers)						198,018,254	64,896		8,322,809	206,405,959
HP.4.1	Dispensing chemists						128,853,192				128,853,192
HP.5	Provision and administration of public health programs	2,965,976,712		363,395		524,809	2,601,747	533,073,003			3,502,539,666
HP.6	General health administration and insurance		25,013,331								25,013,331
HP.7.1	Establishments as providers of occupational health care services							18,554,015			18,554,015
	Providers not specified						36,153,544				36,153,544
Column Sub-Total (THE)		3,546,083,011	25,013,331	5,147,402	211,096,852	3,134,925	3,008,136,341	959,882,626	22,614,509	8,322,809	**7,789,431,806**

Table 4: Financing Agents to Functions (FA x HP)

Functions	Financing Agents									
	HF.1.1.1 Central govt	**HF.1.2 Social Security funds**	**HF.2.1.1 Govt employee insurance program**	**HF.2.5.1 Parastatal co.**	**HF.2.5.2 Private nonparastatal firms (other than health insurance)**	**HF 2.1.2 & HF 2.2 Private insurance**	**HF.2.3 Private HH out-of-pocket**	**HF.2.4 Non-profit institutions serving HH**	**HF.3 Rest of the world**	**Total**
HC.1.1 Inpatient curative care										
HC.1.3.5 STI management										
HC.1.3.6 OI treatment and monitoring										
HC.1.3.7 ARV treatment delivered in outpatient										
HC.3.1 Inpatient long-term nursing care										
HC.4.1 Clinical lab										
HC.4.2 Diagnostic imag.										
HC.5.1.1. ARV drugs										
HC.5.1.3.1 Condoms										
HC.6 Prevention and public health services										
HCR.1 Capital formation										
THE on HIV/AIDS Services										**HC.1-7 + HCR.1**
HCR.2 Education and training										
NHE on HIV/AIDS services										**THE + HCR 1-5**
AD.1 Mitigation										
THAE										**NHE + AD1-4**

Table 5: Providers x Functions (HP X HC)

Function		HP.1.1.1 Govt. hospitals	HP.1.1.2.1 Private for-profit hospitals	HP.1.1.2.2*** Private non-profit hospitals	HP.3.1-3.3 Office of physician, dentists, nurses, clinical officers, etc.	HP.3.4.5.1 Govt. health centers and dispensaries	HP.3.4.5.2+ Private non-profit health centers and dispensaries	HP.3.9.3 Alternative or traditional practitioners (traditional healers)	HP.4.1 Dispensing chemists	HP.5 Provision and admin-istration of public health programs	HP.6 General health admin-istration and insurance	HP.7.1 Establish-ments of occupa-tional services	HP nsk Provider not specified by any kind	Row total THE
HC.1.1	**Inpatient curative care**	712,258,356	287,983,055	185,179,502	-	272,427	-	-					939,344	1,185,693,339
HC.1.3	**Outpatient curative care**	1,210,512,661	107,779,546	253,197,288	114,582,879	37,767,722	41,763,686	206,405,959		2,601,747			35,214,200	2,009,825,687
HC.1.3.6	Treatment and monitoring of OIs (including TB)	31,205,960	-	7,217,807	-	2,419,982	-							40,843,749
HC.1.3.7	ARV treatment	26,004,263	463,324	6,501,066	204,000	-	-							33,172,652
HC.1.3.8	OP curative care that cannot be diseggregated	1,153,302,438	107,316,222	239,478,415	114,378,879	35,347,739	41,763,686	206,405,959	-	2,601,747	-	-	35,214.200	1,935,809,285
HC,2	**Services of rehabilitative care (couseling)**	25,327,450	1,566,587	7,236,414	-	8,094,611	7,236,414							49,461,477
HC.4	Ancillary services	-	-	-	-	165,859	-							165,859
HC.4.1	Clinical laboratory	-	-	-	-	87,751	-							87,751
HC.4.2	Diagnostic imaging	-	-	-	-	78,108	-							78,108
HC.5.1.1+ HC.5.1.2	**Pharmaceuticals**	-	-	-	-	-	-	-	-	-	-	-	-	128,853,192
HC.5.1.9	Pharmaceuticals that cannot be disaggregated	-	-	-	-	-	-	-	-	-	-	-	-	128,853,192
HC.5.1.3	Other medical non-durables (e.g., condoms)	300,000,000	-	-	-	300,000	-		-					300,300,000
HC.6	**Prevention and public health programs**	494,432,964	-	32,266,825	-	26,434,081	17,553,773	-	-	3,262,667,363	-	18,554,015	-	3,851,909,021
HC.6.1.1	PMTCT treatment	52,783,838		253,000		43,422				-				53,080,259
HC.6.2	School health services									-		18,554,015		18,554,015
HC.6.3	*Prevention of communicable diseases*	441,640,877	-	32,013,825	-	26,390,660	17,553,773	-	-	3,221,788,934	-	-	-	3,739,388,069
HC.6.3.1	Voluntary counseling and testing (VCT)	302,046,962		5,485,166	-	-	-			-				307,532,128
HC.6.3.2	Blood safety	1,102,500	-							30,000				1,132,500
HC.6.3.3	Post exposure prophalaxis	462,000		198,000						-				660,000
HC.6.3.4	Information, education, and communication program (IEC)	61,693,976		26,330,660		26,330,660	17,553,773			69,169,646				201,078,715
HC.6.3.5	STI prevention program	76,298,313	-			60,000				524,809				76,883,122
HC.6.3.7	Condom distribution programs	-	-							200,425,031				200,425,031
HC.6.3.8	Other prevention programs (inc TB) and prevention that cannot be disaggregated	37,125	-							2,951,639,447				2,951,639,447

Function		HP.1.1.1 Govt. hospitals	HP.1.1.2.1 Private hospitals for profit	HP.1.1.2.2*** Private hospitals not for profit	HP.3.1-3.3 Office of physician, dentists, nurses, and clinical officers, etc.	HP.3.4.5.1 Govt. health centers and dispensaries	HP.3.4.5.2+ Private not for profit health centers and dispensaries	HP.3.9.3 Alternative or traditional practitioners (traditional healers)	HP.4.1 Dispensing chemists	HP.5 Provision and adminis-tration of public health programmes	HP.6 General health adminis-tration and insurance	HP.7.1 Establish-ments of occupa-tional services	HP nsk Provider not specified by any kind	Row total THE
HC.6.5	Monitoring and evaluation	8,250	-							40,878,429				40,886,679
HC.6.7	**Health admin & insurance**									14,600,000	25,013,331			39,613,331
HC nsk	**Not specified by any kind**	-	-	-	-	-	-	-	-	222,670,557	-			222,670,557
	Subtotal column-THE	2,742,531,430	397,329,188	447,880,029	114,582,879	73,034,700	66,553,873	206,405,959	128,853,192	3,502,539,666	25,013,331	18,554,015	36,153,544	**7,789,431,806**

3.3 Additional Tables for the HIV/AIDS Subanalysis

In addition to the four general NHA tables, an HIV/AIDS subanalysis chapter may contain additional information depending on the data collected from PLWHA and households in general. These additional tables extend the analysis and often provide information that is pertinent to policy. These additional analyses could provide comparisons such as the following:

- A comparison of per capita spending (for both inpatient and outpatient services) at various providers, by individuals living with HIV/AIDS and the average individual.
- A comparison of per capita utilization rates (for both inpatient and outpatient) at various providers, by individuals living with HIV/AIDS and the average individual
- A comparison of expenditures incurred per outpatient and inpatient visit, by household living with HIV/AIDS and average households.
- A comparison of the mechanisms of financing for outpatient and inpatient care among households living with HIV/AIDS and average households
- A comparison of the reasons cited for not seeking care among households living with HIV/AIDS and average households.

All of the above comparisons could look at issues concerning equity by breaking down the information by province, gender, expenditure quintile, marital status, and stage of the disease.

4. Classifications

4.1 NHA Classification Scheme Adapted for HIV/AIDS

National Health Accounts provides a framework for examining the actors involved in HIV/AIDS funding. This framework, developed from the International Classification of Health Accounts, offers a systematic way of identifying and mapping health actors and activities, which are placed in four broad categories: Financing Sources, Financing Agents, Providers, and Functions.

Financing Sources are entities that provide funds for HIV/AIDS health care. This dimension identifies the "financiers" of care targeted at combating HIV/AIDS. Entities that may fall within this dimension include the Ministry of Finance, donors, and households.

In terms of the internationally accepted classification approach, "financing sources" are denoted by the code *FS.*

Financing Agents receive funds from sources and use them to pay for/purchase HIV/AIDS services. This is an important category because financing agents have the power and control over how the funds are used, i.e., they have programmatic responsibilities. This category sheds light on the question "who manages and organizes HIV/AIDS funds?" Examples include the Ministry of Health, the National AIDS Control Program, and insurance companies.

For classification purposes, "financing agents" are denoted by the code *HF.*

Providers are the end users/institutions of HIV/AIDS funds. The funds they receive answer the question, "where did the money go?" These are entities that actually *deliver* the health service. Examples include private and public hospitals, sexually transmitted infection clinics, and volunteer and community health workers.

For classification purposes, "providers" are denoted by the code *HP*.

Functions refer to the HIV/AIDS services and medical goods that providers deliver with their funds. Information at this level answers the question "what type of HIV/AIDS service was actually produced?" Obtaining information at this principal dimension is perhaps the most critically sought from a policy perspective. Categories of functions may include curative care, long-term nursing care, medical goods such as such as prescribed medicines like ARV drugs, palliative care, preventive services, and administration.

For classification purposes:

"Direct health functions" are denoted by the code *HC.*

"Health care-related functions" are denoted by the code *HCR.*

This paper proposes the addition of a third functional subcategory termed "Addendum" functions, which would accommodate non-health HIV/AIDS expenditures. "Addendum functions" would be denoted by the code *AD*

According to the ICHA approach, each of these four broad categories is subdivided into more specific entities. For example, "financial sources" of HIV/AIDS funds may be broken down into the following ICHA categories/classifications: "public funds," "private funds," and "rest of the world funds."

4.2 Approach to Assigning Classification Categories

The NHA *Producers Guide* lists the recommended classifications for each of the four principle dimensions. Their coding is developed in the following manner, beginning with a

- *Letter* code for the principal ICHA categories, e.g., "FS" for Sources
- Then followed by a *numerical* code, e.g., "FS.1"
- And finally, the ICHA name for this subcategory, e.g., "FS.1 Public Funds"

It should be noted that the ICHA approach allows for addition of subcategories to accommodate any country's unique HIV/AIDS entities/services. Specifically, the NHA approach stipulates the following criteria when designing a country's HIV/AIDS classification structure:

- Respect, to the extent possible, the existing international standards and conventions *but* also be flexible to meet the specific policy needs required for national analysis. In short, this criterion states that it is possible to introduce nationally relevant categories but this should be done to fit within the broader ICHA categories.

It also is possible to eliminate ICHA categories that are not relevant in a particular country. When introducing new subclassifications, the first two numbers of the code should match ICHA categories. The numbers that follow designate the new, nationally relevant category.

Take, for example, a country's interest to compare spending between public and private hospitals: ICHA only provides a general classification for hospitals, namely *H.P.1.1 "General Hospitals."* This is due to its original purpose to serve as a classification system for countries in the Organization for Economic Cooperation and Development (OECD), which tend to have only public providers and not a mix of public and private. So for OECD countries at least, it was not a policy concern to distinguish between public and private hospitals. However, it is a policy concern for many middle- and low-income countries, which have more pluralistic health systems.

To accommodate a "public" and "private" distinction for hospitals, NHA teams can add further subclassifications:

HP.1.1.1 = "GOVERNMENT general hospitals"

HP.1.1.2= "NON-GOVERNMENT general hospitals"

This NHA approach to classifications allows country teams to "cross-walk" from nationally relevant classifications to the international standard for classifications.

Each category should be designed such that it is mutually exclusive and exhaustive. This ensures that each expenditure transaction can be placed in ONE AND ONLY ONE CATEGORY. Annex B contains an illustrative classification scheme that has been developed for the HIV/AIDS subanalysis. Annex C contains a glossary of terms commonly used in the NHA subanalysis for HIV/AIDS, intended as reference terminology for the NHA technical team.

5. Data Collection for HIV/AIDS Activities

This chapter reviews the types of data necessary to the development of an HIV/AIDS subanalysis in the context of a general NHA. It provides guidance on how to organize the data collection process for HIV/AIDS activities and describes the data needed to populate the NHA HIV/AIDS tables, including the policy questions that specific data address as well as the strengths and weaknesses of various data sources.

5.1 Overview of Data Collection Process

Data collection for HIV/AIDS activities should be undertaken in an ad hoc manner after careful assessment of the data available for the general NHA exercise and after consider the extent to which the data could be linked to the HIV/AIDS dimension of health accounts. The decision to generate data on HIV/AIDS expenditures should be considered by first evaluating the feasibility of adding questions to ongoing primary data collection instruments that may be implemented for the sector-wide NHA or for other reasons. Often it is determined that specific efforts are needed to collect data on PLWHA; the generation of such data on household spending on HIV/AIDS should be made after careful assessment of how the epidemic has impacted the population in the country.

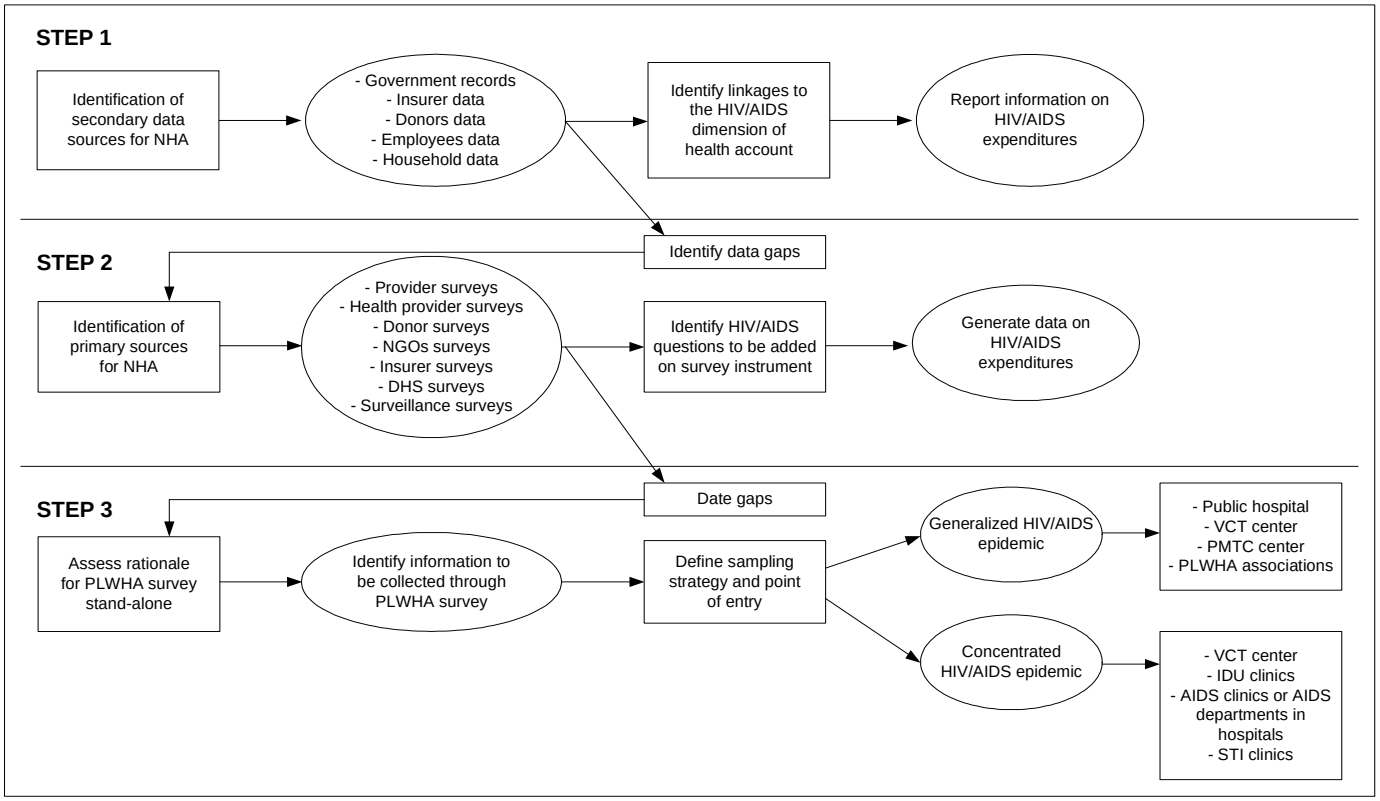
As part of the sector-wide NHA exercise, the team needs to identify the types of secondary and primary data needed and available at the country level.[3] In order to obtain a comprehensive picture of the flow of funds for HIV/AIDS, the NHA team should determine appropriate, feasible, and cost-effective ways for collecting data on HIV/AIDS expenditures in the following entities:

- Relevant government agencies such as the Ministry of Finance, Ministry of Health, and perhaps a multisectoral AIDS committee
- Employers
- Households living with HIV/AIDS
- Nongovernmental organizations
- Donors
- Insurance companies
- Providers of HIV/AIDS services including hospitals, clinics, physician offices, pharmacies, and, if deemed appropriate, traditional healers

[3] For further information please refer to chapters 6 and 7 of the *Producers' Guide* (WHO, World Bank, and USAID 2003) and to *A System of Health Accounts* (OECD 2000).

The steps involved in a data collection plan for HIV/AIDS activities are presented in the flowchart in Figure 4. This chart will allow the NHA team to identify the sequence of events that support the creation of the data collection plan.

Figure 4: Data Collection Plan Flow Chart



Note: DHS = Demographic Health Survey, IDU = injecting drug user

STEP 1

As a first step, the team should review secondary sources available for the NHA exercise and identify data that are useful for the HIV/AIDS dimension of health accounts. This review should not be confined to documents and data sources that are selected for the general NHA. For example, in some countries, donors issue annual reports on their funding contributions; these reports are often used in the general NHA. However, many donors also have HIV/AIDS-specific publications that describe their targeted programs in greater detail. The quality of the data should be assessed to determine whether the data are reliable. The degree of disaggregation may be insufficient for the data to be useful in the subanalysis estimation. This exercise will identify existing data gaps to be filled by primary data collection.

STEP 2

In a second step, the team will identify primary data sources used in the general NHA exercise. When the HIV/AIDS subanalysis is conducted concurrently with a sector-wide NHA, there may be ongoing NHA surveys that already target many of the entities listed above. The team will carefully determine which HIV/AIDS-focused questions could be added to these surveys to generate useful information on HIV/AIDS expenditures.

Insertion of expenditure questions into established (non-NHA) surveys that include biomarkers (such as HIV antibody testing on saliva) for HIV/AIDS, such as the Demographic and Health Survey+ (*DHS+*), also is highly valuable for the NHA HIV/AIDS exercise. The NHA team should try to take advantage of this by adding questions on household spending on HIV/AIDS.[4]

Piggy-backing on ongoing nationally representative household surveys is highly recommended especially in countries where the epidemic is firmly established in the general population, because it allows for the inclusion of household expenditures on health that may not occur in the formal health care system, such as care sought from traditional healers. Also, it offers a more realistic view of HIV health care utilization in the country.

In countries where the epidemic is still confined in subpopulations, a significant part of household spending related to HIV/AIDS will be concentrated in groups severely affected by the epidemic, such as intravenous drug users or commercial sex-workers. In this context, piggybacking on surveys targeted to at-risk subpopulations implemented in the context of second-generation HIV surveillance is appropriate.

In instances where there is no existing study or ongoing survey, the team should still carefully assess whether or not primary data collection is warranted. The NHA approach of obtaining the same piece of information from more than one data source (triangulation) may obviate the need for a survey. For example, even if a provider (or facility-based) survey is not conducted for the general NHA exercise, funds flowing to providers for HIV/AIDS services can be captured from the NHA employer, government, insurance, and PLWHA surveys. Pharmacy expenditures can be tracked through PLWHA surveys, government financial records, NHA employer surveys, and so forth.

A significant time and resource savings can be achieved if the data can be obtained in this way. If nothing else, this exercise will identify data gaps to be filled by setting up freestanding surveys for the HIV/AIDS subanalysis.

STEP 3

The third step will assess the rationale of conducting freestanding surveys for capturing household spending on HIV/AIDS. The need to capture household spending on HIV/AIDS should be kept in mind when creating the data plan. In countries widely impacted by the epidemic, household spending on HIV/AIDS can account for a significant part of HIV/AIDS expenditures.[5]

The most common source of information about private expenditures is a household survey. Generally, PHR*plus* does not recommend collecting data on household spending on HIV/AIDS in a general household survey that does not include HIV biomarkers. The biggest pitfall in implementing freestanding household surveys to capture household spending on HIV/AIDS is to accurately assess household members' HIV status. Household surveys based on self-reported symptoms to assess HIV/AIDS status would provide low-quality estimates on individuals infected with HIV (USAID and MEASURE Evaluation 2000). As clinical signs define AIDS, recall bias could be the most common problem in such approach. Respondents may not be able to remember accurately or may lack the technical knowledge to identify the clinical conditions they experienced, critical to define their HIV status and the related household spending. The exception would be in countries where households

[4] PHR*plus* has been collaborating with Measure *DHS+* in Rwanda.
[5] The first NHA subanalysis for HIV/AIDS, done in Rwanda in 1998 showed, that households were the primary financiers of HIV/AIDS services, providing 93.5 percent of total HIV/AIDS funding.

with sero-positive individuals can be identified and those individuals consent to participating in the survey. Based on PHR*plus* experience, such circumstances are rare and technically difficult to implement.

Household expenditures on HIV/AIDS will usually be colleted through surveys targeting people living with HIV/AIDS. Potential respondents to a PLWHA survey questionnaire are generally identified through their key points of entry into the health care system, which vary depending on the nature of the epidemic within a given country. For example, in the context of a generalized epidemic where the virus is well established in the general population, HIV/AIDS individuals living with HIV/AIDS may be identified at clinics and hospitals offering VCT services and through associations of people affected by the disease. In a concentrated epidemic, where the disease is contained within certain high-risk groups such as intravenous drug users or commercial sex workers, individuals living with HIV/AIDS may be more easily identified at drug treatment clinics, NGOs providing prevention services, or at clinics offering care for sexually transmitted infections (STIs).

In order to provide pertinent financing information for policy formulation as well as for monitoring and improving the targeting of resource flows for HIV/AIDS, PHR*plus* recommends the involvement of a Steering Committee comprising of key HIV/AIDS stakeholders. Their involvement can help guide the NHA process and formulate the policy focus of the subanalysis. Also, their buy-in promotes greater acceptance of the findings and facilitates data collection from entities that traditionally offer limited access to their financial information, such as insurance companies and donors.

A subanalysis can take from six months to one-and-a-half years. Its duration generally depends on the amount of primary data needed and on the extent to which the subanalysis process is being institutionalized.[6]

5.2 Needed Data and the Research Questions They Address

The purpose of capturing data from so many health sector entities is described in Table 6, in the form of research questions addressed to each entity.

[6] The more primary data collected and the more emphasis on institutionalization, the longer the process takes. Institutionalization entails the involvement of key stakeholders and the dedicated participation and learning of the government NHA team (as opposed to an outside consultant) throughout the data collection, cleaning, analysis, and report writing phases. Once institutionalized however, the length of time to complete a subanalysis should dramatically decease.

Table 6: Needed Information for HIV/AIDS Subanalysis

Entities from which NHA requires expenditure information	Research questions that data address
Households living with HIV/AIDS	How much do households in which at least one of its members is living with HIV contribute to various types of insurance? How much do households living with HIV/AIDS pay out-of-pocket for inpatient and outpatient services at various providers? Additional questions outside the NHA tables: How do individuals living with HIV/AIDS compare to the average individual in terms of per capita expenditure for inpatient and outpatient services at various providers? How do individuals living with HIV/AIDS compare to the average individual in terms of per capita utilization rates for inpatient and outpatient services at various providers? How do individuals living with HIV/AIDS compare to the average individual in terms of average expenditure for each outpatient and inpatient visit at various providers? What are the mechanisms for financing among individuals living with HIV/AIDS and the average household for inpatient and outpatient care obtained at various providers? What are the principal reasons for not seeking care between households living with HIV/AIDS and the average household? For the "additional" questions, what types of equity issues are raised when the expenditure patterns are broken down by gender, income, marital status, stage of the disease, and geographic location?
Providers of HIV/AIDS services (e.g., hospitals, clinics, physician office, pharmacies, and, if applicable, traditional healers)	Which financing agents contribute to providers? How much is received from each financing agent? How do providers spend their funds across each type of function?
Donors	To which financing agents do donors contribute? How much is contributed? Do donors transfer their funds directly to providers? If so to which ones and how much?
NGOs	From which financing sources do NGOs receive their HIV/AIDS funds? How much is received? How do NGOs allocate their funds across each type of provider and function?
Relevant government entities (e.g., MoF, MoH, and perhaps multisectoral AIDS committee)	How much and to whom does the Ministry of Finance give HIV/AIDS funds? From which financing sources do the various ministries (excluding the Ministry of Finance) receive their HIV/AIDS funds? How much is received? How do the various ministries (excluding the Ministry of Finance) allocate their HIV/AIDS funds across each type of provider and function?
Insurance companies	From which financing sources do insurance companies receive their funds for HIV/AIDS coverage? How much is received? How do insurance companies allocate their HIV/AIDS funds across each type of provider and function?
Employers	How much and to whom (financing agents) do employers give HIV/AIDS funds? How much goes toward on-site health services for employees? For what types of service? How much goes toward insurance contributions for employees?

5.3 Collecting Data on Households Living With HIV/AIDS

For the purpose of the NHA subanalysis for HIV/AIDS, households living with HIV/AIDS are *households in which at least one member is living with HIV/AIDS.*

Data collection on household spending for HIV/AIDS will be done through the implementation of a targeted survey among people living with HIV/AIDS. People targeted by primary data collection may be 1) individuals who have serologic evidence of HIV infection by being tested positive for HIV or 2) in countries where testing is not pervasive, individuals who fall within the symptom-based WHO AIDS case definition (as identified by their health care physician or nurse). The NHA subanalysis for HIV/AIDS will focus preferably on patients tested positive. In cases where the sample of HIV tested positive individuals is too limited and not representative of the overall population of PLWHA, the inclusion of people identified as living with AIDS using the WHO AIDS case definition may be justified. With respect to measuring expenditures of households living with HIV/AIDS, this generally mandates primary data collection targeting people living with the disease but can also be measured by amending an established survey that includes HIV biomarkers.

Whenever primary data are collected, the ethical guidelines set out in Box 1 should be followed.

5.3.1 Surveys Including HIV Biomarkers

In countries where ongoing surveillance surveys or nationally representative household surveys with large sample size that include HIV/AIDS biomarkers (such as HIV antibody testing on saliva), "rider" questions on HIV/AIDS-related expenditures could be included.

If piggybacking on a survey like the DHS+ is feasible, there are numerous significant benefits over the implementation of targeted PLWHA surveys. As stated earlier, this approach is highly suited for countries where the disease is widespread through the population. An advantage to these random based national surveys is that they avoid the selection biases inherent in targeted PLWHA surveys, which generally include only those who seek formal health care and those who are aware that they are positive.

In countries where HIV is prevalent only in defined subpopulations, concentrating resources on tracking per capita expenditures and utilization of services among the subpopulations most infected by HIV – such as injecting drug users or commercial sex workers – is recommended. Piggybacking on second generation HIV surveillance surveys [7] targeted to populations severely affected by HIV would have significant benefits over PLWHA surveys.

Also, in countries where testing is not widely available, identifying people infected by the virus can be a complex undertaking. Thus, the inclusion of HIV biomarkers in a survey context offers higher accuracy in its findings. However, this also raises issues of logistic, cost, results sharing, and confidentiality of results for a disease highly stigmatized in most societies (USAID and MEASURE Evaluation 2000).

[7] The main objective of second generation surveillance is to monitor HIV and high-risk behavior trends over time in order to provide essential data needed for the development of interventions and the evaluation of their impact. Therefore, there needs to be effective coordination between the surveillance and prevention programs (UNAIDS 2002). More information is available at www.unaids.org

Box 1: Ethical Guidelines for Primary Data Collection

The NHA methodology for HIV/AIDS recommends that surveys be conducted among people infected with HIV. NHA teams should respect certain guidelines and follow ethical principles while implementing surveys involving human subjects. PHR*plus* recommendations developed here are in line with the existing UNAIDS recommendations on HIV and AIDS-related ethical principles, as well as widely recognized international principles in bioethics.

International guidelines have focused on biomedical research involving individuals, with a concentration on clinical trials. Nonetheless, studies developed for the purpose of the NHA sub analysis for HIV/AIDS should be conducted in accordance with international principles, as NHA-related studies can be classified as biomedical research studies "looking at human-related health behavior in a variety of circumstances and environments". PHR*plus* strongly recommends that country NHA teams respect the following guidelines during the collection and interpretation of information obtained through the interview of persons living with HIV/AIDS or the review of their records.

Ethical Review Committees

In accordance with international guidelines, the NHA team in charge of carrying out studies involving individual should seek the approval of the national Ethical Review Committee. In many countries, national Ethical Review Committees have been created by the Ministry of Health or by other national entities. Ethics approval, satisfying the norms of the research established by local ethical committee, will be applied.

When the NHA is implemented with the financial support or technical assistance of a company that is based outside the country doing the NHA exercise, the company should also submit the research protocol for ethical and scientific review in its country of origin. Ethical committees in both countries should review and approve the study design.

Individual Informed Consent

Individual informed consent is *strictly* required in studies in which questionnaires are administered to human subjects living with HIV/AIDS. Informed consent must be obtained prior to conducting the interview.

After being informed about the scope and nature of the study and its expected benefits, the respondent should be told that the interview is completely voluntary. The interviewer should inform the respondent in a language that is familiar. The respondent is free to refuse to participate in the study or may choose to withdraw from the interview at any time. Useful guidelines for the interviewing process are provided in *the Interviewer Guidelines for Health Care Utilization and Expenditure Survey for People Living with HIV/AIDS* (PHR*plus* 2004).

In the case of an individual unable to give informed consent, permission of a legally authorized representative should be obtained. Where a child is capable of giving informed consent, his/her consent should be obtained, but also that of a legally authorized representative. A child's refusal to participate will be respected.

Respondents should sign a consent form. The NHA team should keep track of the number of respondents who refused to partake in the interview.

Individual informed consent is not required when the data source is medical records. Medical records can be used without the patient's consent on the condition that the patient did not express refusal or reluctance to participate to biomedical research in the past.

Recompense for Study Participation

Interviewees can be reimbursed if they incur transportation fees and other expenses as part of the interview process entails. Payment in money or kind simply for participation is not recommended as it could bias the sample of the study and undermine the individual capacity to freely give his/her informed consent.

Benefits of Study Participation

The NHA team should balance the benefits and harms of study participation for an individual living with HIV/AIDS. As an example, the decision of including children less than 16 years old in a study should be weighed against the usefulness of the information collected from this age group. Asking questions to children or teenagers about HIV/AIDS-related signs or symptoms might have a devastating psychological impact, especially if the HIV status has not been clearly previously disclosed to the child interviewed. In contrast, in countries where civil war and the HIV/AIDS epidemic have caused an increasing number of orphans, a significant proportion of teenagers infected with HIV may be the head of households and very much aware of their status. Thus, their participation in the study may be necessary to ensure a representative sample. The NHA team should carefully weigh the need to interview minors living with HIV/AIDS, ensure that they have permission of the ethical review board, and ensure that the team will not psychologically harm the respondent by inadvertently disclosing his/her HIV status or asking questions related to HIV/AIDS.

PHR*plus* discourages including children under 16 years old in surveys. If their inclusion in the study is necessary to ensure representative sample, the respondent to the PLWHA survey should be the children's caregiver.

Confidentiality

The NHA team implementing surveys among PLWHA must guarantee the confidentiality of the subject research data. The team should be fully aware of the damage caused by a breach of confidentiality regarding HIV status in a country where HIV is stigmatized.

To ensure strict confidentiality, PHR*plus* has trained data collectors. They are required to maintain strict confidentiality concerning all personal information obtained from individuals in the context of their professional work, such as health workers.

To protect the individual's privacy, the data is collected anonymously; no names are recorded on the questionnaires, and medical records are not removed from the hospital or clinic. The data collected is stored in a safe place.

Table 7 highlights the strengths and weaknesses of probability sample survey with biomarkers for the purpose of the NHA HIV/AIDS exercise

Table 7: Strengths and Weaknesses of Probability Sample Survey with Biomarkers

Strengths	Weaknesses
▲ Directly linked to social, economic, demographic, and other characteristics of patients ▲ Can be specifically designed to capture the exact information health accountants are looking for ▲ Use of biomarkers allows for the most accurate information on out-of-pocket expenditures, which is also useful for conducting equity analysis ▲ Sampling is more representative compared to targeted surveys ▲ Can track non-health HIV/AIDS spending ▲ Can track private health-related items	▲ Expensive and time-consuming to conduct; therefore, data might be old or have to be extrapolated to the current year. Extrapolation results in loss of accuracy ▲ Not possible to ask to many HIV/AIDS-specific questions such as those relating to the stage of the disease.

5.3.2 Targeted People Living with HIV/AIDS Surveys

Unless a probability sample survey with biomarkers is completed, the NHA team will need to conduct a targeted PLWHA survey.

These targeted surveys provide access to people living with HIV/AIDS and allow for the collection of spending data on expenditures for inpatient and outpatient services. In addition, PLWHA surveys provide opportunities to obtain other types of information such as utilization of health care, socioeconomic composition of household, and mechanisms of payment. In countries where PHR*plus* assisted, recent PLWHA surveys have also been used to examine the expenditure pattern of individuals living with HIV/AIDS by stage of the disease. Out-of-pocket spending for HIV/AIDS and utilization of HIV/AIDS services varies according to the progression of the disease in an individual infected with HIV. PHR*plus* recommends taking into account the stage of the HIV/AIDS disease when generating data on individual spending on HIV/AIDS[8].

It should be noted that PLWHA surveys are representative of the subpopulations attending those points of services. The extent to which the results can be "generalized" to the rest of the population is variable and should be addressed with great caution. Such surveys can be used with explicit adjustments to reflect assumed differences between the study population studied and the ideal population we would like to describe (individuals living with HIV/AIDS in the country of interest).

An overview of the strengths and weaknesses of PLWHA surveys is presented in Table 8.

[8] This approach is a work in progress and currently is being field-tested in Rwanda.

Table 8: Strengths and Weaknesses of PLWHA Surveys

Strengths	Weaknesses
▲ Focuses preferably on patients tested ▲ Yields useful information on out-of-pocket expenditure ▲ Can also obtain data on utilization, socio-economic composition of the household, mechanisms of payment, reasons for not utilizing health care services, and, to some extent, the stage of the disease for the respondent ▲ Cheaper to implement because done on a smaller scale in comparison to a general household survey	▲ Focuses on only those who seek prevention and care services in the formal health care system ▲ Generally biased towards those with greater access to care and education on HIV ▲ May underestimate expenditures on non-formal health care system, such as traditional healers. ▲ Capture OOP spending on HIVAIDS at a certain point of time and may not reflect the annual spending on HIV/AIDS ▲ Focuses on those who seek advice to PLWHA associations ▲ Could be biased the most educated individuals among the HIV/AIDS population

5.3.2.1 Developing a Sampling Strategy for the Targeted PLWHA Survey

Having access to HIV-positive people who have been tested and confirmed in developing countries is challenging, especially where HIV testing is not widely available. This requires the identification and use of specific "point of entry" sites at which individuals living with HIV/AIDS enter the health system. These points of entry are largely determined by the nature of the epidemic in the country.

5.3.2.1.1 Determining Points of Entry for PLWHA Survey

A clear understanding of how the HIV/AIDS epidemic has impacted the population will lead to better identification of providers of HIV/AIDS services and better understanding of where household spending on HIV/AIDS care can be captured. The nature of the HIV/AIDS epidemic in a country sets the tone for the identification of points of entry where potential respondents to the PLWHA survey can be identified. Box 2 describes UNAIDS' classifications that groups the HIV epidemic into three types: low-level, concentrated, and generalized.

Box 2: HIV/AIDS Epidemic States

Generalized

- Principle: In generalized epidemics, HIV is firmly established in the general population. Although subpopulations at high risk may continue to contribute disproportionately to the spread of HIV, sexual networking in the general population is sufficient to sustain an epidemic independent of subpopulations at higher risk of infection.
- Numerical proxy: HIV prevalence consistently over 1 percent in pregnant women.

Concentrated

- Principle: HIV has spread rapidly in a defined subpopulation, but is not well-established in the general population. This epidemic state suggests active networks of risk within the subpopulation. The future course of the epidemic is determined by the frequency and nature of links between highly infected subpopulations and the general population.
- Numerical proxy:
  - HIV prevalence consistently over 5 percent in at least one defined subpopulation.
  - HIV prevalence below 1 percent in pregnant women in urban areas.

Low-level

- Principle: Although HIV infection may have existed for many years, it has never spread to significant levels in any subpopulation.

Recorded infection is largely confined to individuals with higher-risk behavior: e.g., sex workers, drug injectors, men having sex with other men. This epidemic state suggests that networks of risk are rather diffuse (with low levels of partner exchange or sharing of drug injecting equipment), or that the virus has been introduced only very recently.

- Numerical proxy: HIV prevalence has not consistently exceeded 5 percent in any defined subpopulation.

Source: WHO and UNAIDS 2000

Once the NHA team has understood the nature of the epidemic its country faces, the team will need to do the following:

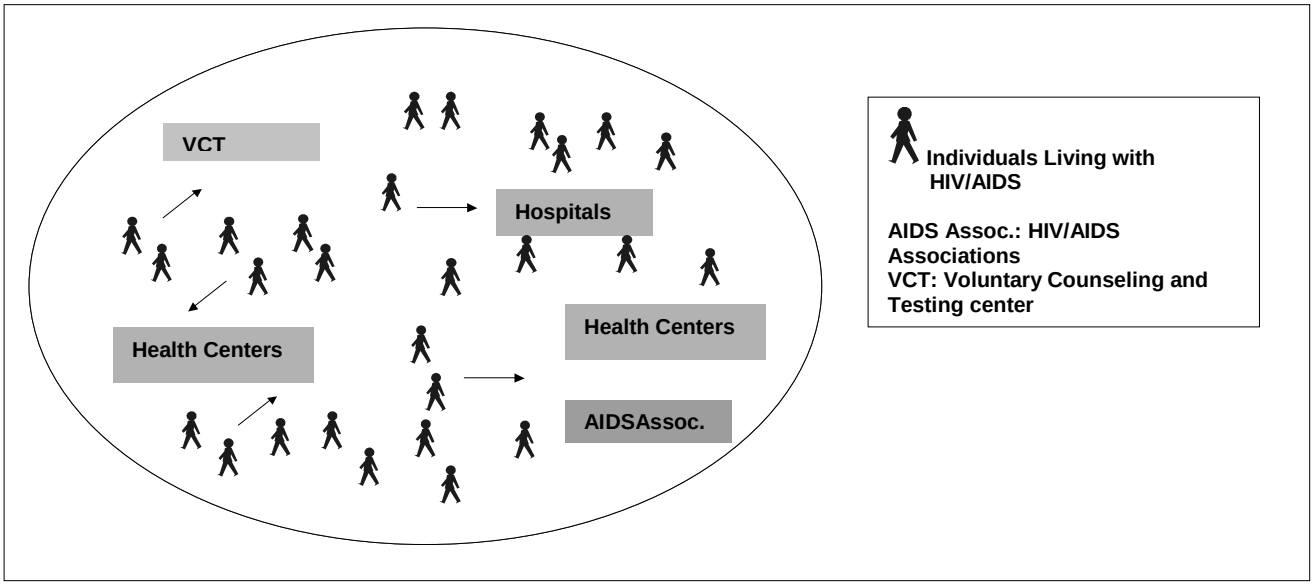
- Map out the spread of the disease among the population in order to provide a better understanding of where to track household expenditures
- Identify where populations living with HIV/AIDS seek health care services so as to contribute to a sampling design and selection of the "point of entry"

Generalized Epidemic

In a generalized epidemic, where the virus is firmly established in the general population, the epidemic goes beyond subpopulations highly infected by HIV (UNAIDS 1998). Many countries in sub-Saharan Africa have already entered this epidemic state.

Figure 5 maps out potential providers of HIV/AIDS services to be selected as points of entry for PLWHA surveys when the NHA/HIV exercise is conducted in a generalized epidemic setting.

Figure 5: Identification of Points of Entry in a Generalized Epidemic



In this context, potential points of entry to be selected in the NHA HIV/AIDS exercise are (but are not limited to) hospitals and health centers, VCT centers, PMTCT centers, and associations where people living with HIV/AIDS seek care and support.

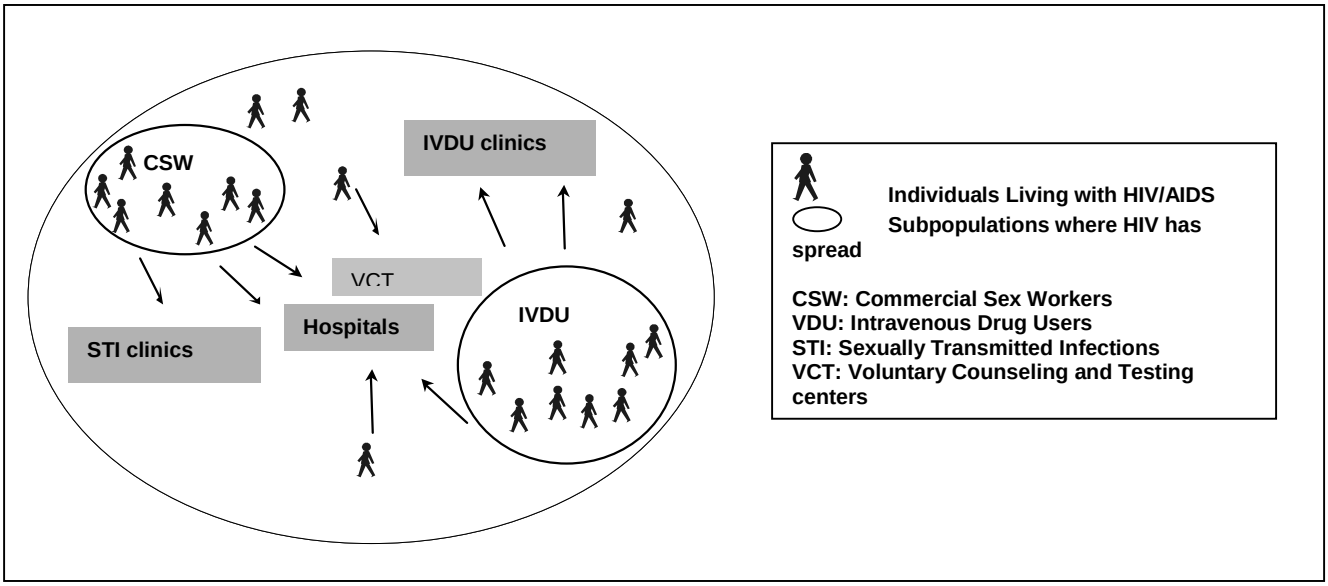
Concentrated Epidemic

In a concentrated epidemic, HIV is mainly confined to subpopulations. Subpopulations that are hard hit by the epidemic may vary across regions of the world and according to cultural context. The most common groups identified are intravenous drug users, men having sex with men, and commercial sex workers. Many of these groups utilize specific points of HIV/AIDS services that provide prevention, care, treatment, or support tailored to their specific needs.

In a concentrated epidemic setting, potential points of entry to be selected in the NHA HIV/AIDS exercise are (but are not limited to) treatment clinics for injecting drug users, STI clinics near "red-light districts," and health clinics providing care to men having sex with men.

Figure 6 maps out potential providers of HIV/AIDS services to be selected as points of entry for PLWHA surveys when the NHA/HIV exercise is conducted in a concentrated epidemic.

Figure 6: Identification of Points of Entry in a Concentrated Epidemic



Low-level Epidemic

In a low-level epidemic, populations with higher-risk behaviors generally exist but are less affected by HIV than in areas. The mapping of individuals living with HIV/AIDS will be similar to the one described in the concentrated state but with fewer sites and individuals involved in high-risk practices for HIV transmission.

Countries in which the epidemic has significantly impacted the health system are more likely to express the need for a NHA HIV/AIDS subanalysis than countries in a low-level state. Nonetheless, such demand may arise in countries where the HIV/AIDS surveillance and reporting system may not provide an accurate picture of the impact of HIV/AIDS. In such places, the emergence of HIV/AIDS in neighboring countries may raise awareness of policymakers of the threat of HIV/AIDS and the need to track the increasing amount of HIV/AIDS expenditures. As recommended by UNAIDS, low HIV prevalence does not equate to a low priority strategy (Family Health International and UNAIDS 2001). At the policy level, governments may want to focus on the prevention of HIV, to preclude a low-level epidemic from becoming generalized.

5.3.2.1.2 Sampling Framework for PLWHA Survey

Providing a representative sample for the population living with HIV/AIDS is of crucial importance in providing reliable data on household spending on HIV/AIDS. PHR*plus* recommends the involvement of statistician to ensure quality in the sampling approach of the PLWHA survey. The steps described below provide guidance on devising the sampling plan.

First, the target population of the PLWHA surveys should be clearly defined. For example, the population in scope could be all adults who have been diagnosed as HIV-positive in a country where HIV testing is widely available. The estimates from the survey relate to this target population. It has to be recognized that the population from which we actually select a sample may not be the same as the target population.

Second, the sampling frame used to sample from the population in the scope of the survey needs to be explicitly stated. The sampling frame is simply a list of all the individuals in the population from which we select a sample. Sometimes, the sampling frame may not cover the entire target population; still, estimates that relate to the target population can be obtained. Because there may not be a list of individuals who are tested HIV-positive, the sample may be selected using a two-stage design. Hospitals, health centers, and HIV/AIDS associations are selected at the first stage and individuals at the second stage. In a two-stage design, two sampling frames are used. The first is the list of all the hospitals, health centers, HIV/AIDS associations, and other facilities. Each population is to be considered a stratum and samples will be drawn independently. Therefore, the sampling team should describe the source of the facility lists. The quality of these lists as well as their completeness and accuracy should be carefully checked. For example, if there is a list of hospitals, does it cover all hospitals, both private and public in all provinces, how many are on the list? Any exclusion from the list should be given. The frame should also contain data to enable stratification of the population. For example, we may want to select hospitals in each province or by rural/urban, in which case this information is needed on the sampling frame.

Third, the process by which the total number of individuals with HIV that is required in the overall sample, the sample size, will be determined. Were there any precision considerations or was the sample size determined based on cost and operational requirements? Such information should be documented.

Fourth, the total sample allocation should be clearly documented. How was the total sample allocated to different strata? For example, how many individuals living with HIV/AIDS were selected from hospitals, health centers, and HIV/AIDS associations?

Fifth, the sample selection of points of entry and individuals living with HIV/AIDS should be specified. When selecting a sample of hospitals, the method of selection will be described. Is it simple random sampling, stratified random sampling, or systematic selection? Will all the hospitals be included in the sample? Similarly, the sampling method for selecting health centers and associations must be described when those health providers are part of the sampling frame.

The method of selection of individuals living with HIV/AIDS from each selected point of entry will also be clearly defined. For example, if there are 100 patients in a hospital and we want to select 20 patients, we may select one patient at random from the first five patients and select every fifth patient thereafter, giving a sample of 20 patients. Whatever the method, even if it is ad hoc, the sampling team will carefully document it.

Sixth, information required for sampling weights and estimation will be collected. To obtain population-based estimates of means, totals, proportions and ratios, each responding patient will have a sampling weight. To determine the sampling weight, the following information is needed:

- The total number of facilities in the population in each stratum: For example, if the team is selecting a sample of hospitals, the number of hospitals in the population will be needed. If the team is selecting hospitals in each province, the number of hospitals in the population in each province is needed, as shown below.

Province	Number of hospitals in the population	Number in the sample
1	X	X
2	X	X
3	X	X

For each selected facilities in each stratum, the population number of patients and the sample number selected is needed.

If the team is selecting simple random-sampling samples, the sampling weight is computed as follows:

Assume that there are 10 hospitals and we select eight hospitals. The first-stage sampling weight is the ratio of the number of hospitals in the population to the number in the sample. In the example, it is 10/8 = 1.25. In this hospital, if there are 100 patients, and we select 20, then the patient weight is 100/20 =5.

Assume that out of 20, we get 15 responses, then the overall nonresponse-adjusted sampling weight is

$$1.25 \times 5 \times (20/15) = 8.3333.$$

Each of the 15 patients for whom we have data will be assigned a sampling weight of 8.3333.

If the team finds that some patients selected are not eligible for the survey and should have not been selected, then they delete them from the nonresponse adjustment. For example, out of the 20 patients selected, we find that two are not eligible for the survey and three did not respond (the response was not received), then the weight is

$1.25 \times 5 \times (18/15) = 7.5.$

Each of the 15 patients will be assigned a sampling weight of 7.5.

These weights will be used for all statistical analyses.

5.4 Obtaining Data from Entities *Other* than Individuals Living with HIV/AIDS

In order for the HIV/AIDS subanalysis to present a comprehensive picture of the flow of HIV funds, it also needs to examine data on entities other than individuals living with HIV/AIDS, such as providers, pharmacies, donors, NGOs, insurance companies, and employers. In designing the data collection process for these entities, the NHA team should follow the steps listed above for collecting information from individuals and households, i.e., assess data that already are available and, if more data are needed, the possibility of getting them through triangulation or of piggybacking on another survey. Again, doing so saves time and resources.

5.4.1 Provider Data

Providers of HIV/AIDS services can be hospitals, clinics, offices of physicians and nurses, pharmacies, and if applicable, traditional healers. Data on providers can be obtained through a number of ways: 1) by examining other financing agents report in terms of their contribution to providers, and 2) by conducting provider (facility-based) surveys.

The NHA approach of triangulating data – obtaining the same piece of information from more than one data source – allows for a certain amount of redundancy in the data collection process. For example, if a provider survey is not conducted for the general NHA exercise, this does not necessarily mean that it needs to be conducted for the HIV/AIDS subanalysis, because funds flowing to providers for HIV/AIDS services can be captured from the surveys done with the various financing agents that transfer funds to providers, e.g., NHA employer, government, insurance company, and PLWHA surveys. The same may be said for pharmacies, whose expenditures can be tracked through PLWHA surveys, government financial records, NHA employer surveys, and so forth.

5.4.1.1 Facility-based Survey

Facility-based surveys are another avenue for collecting data on providers. These surveys are generally administered to the chief medical officer or accountant in a facility, information on specific health expenditures should be available from the financial records. If resources permit, these surveys could also be a mechanism for conducting a patient record review of services administered to individuals living with HIV/AIDS.[9]

For public sector providers, facility-based surveys can supplement data from government budgetary documents and help to disaggregate expenditure by function (for example, inpatient and outpatient services). Private sector providers may be reluctant to share their financial information in the survey (this is another good reason to ensure their buy-in from the beginning of the NHA process, for example, by giving their representative a place on the steering committee). It is important to note that facility based surveys are difficult to implement, since many facility accounting systems do not necessarily correspond with NHA categories. For example, facilities may tend to record financial spending in terms of inputs, such as personnel, salaries, maintenance and so forth.

If a provider survey is conducted, then the sampling of providers should take into account the context of the HIV/AIDS epidemic in the country. The sample will need to be representative of providers the HIV/AIDS services in the country of interest. It is also advisable to select facilities that can be leveraged as key points for individuals living with HIV/AIDS, to whom the PLWHA survey can be administered.

[9] The data obtained from a record review can help cost HIV/AIDS services and estimate utilization of services, which when combined can serve as an estimation of expenditures. However, a patient record review is an intensive undertaking and requires the data collector to have a clinical background.

Table 9: Strengths and Weaknesses of Facility-Based Surveys

Strengths	Weaknesses
▲ Most specific and comprehensive in the coverage of relevant health expenditures ▲ Records contain little spending that falls outside the boundary of health ▲ Can do a patient record review to assess utilization and cost of HIV/AIDS services	▲ Different accounting methods in hospitals may make it difficult to cross-walk to NHA classifications ▲ Accuracy of such information is questionable as providers may be reluctant to share true financial information ▲ There may be many providers in a given country and it may be difficult to get an adequate sample

5.4.1.2 Traditional Healer Provider Survey

Depending on the country context and the perception of the government, traditional healers may also be seen as providers from which expenditure data should be collected. In many countries, traditional healers provide services to those not able or desiring to go to the formal health care system. Also, traditional healers may also treat those who may not have been tested for HIV but show the symptoms for AIDS. As there is a paucity of information on traditional healers in many developing countries, there may be need to conduct a separate survey for this group of providers. The HIV/AIDS subanalysis may benefit from adding HIV/AIDS-specific questions to perhaps an ongoing general NHA survey of traditional healers.

Table 10: Strengths and Weaknesses of Traditional Healer Surveys

Strengths	Weaknesses
▲ Can capture expenses (which in many sub-Saharan African countries is estimated to be very large) incurred by those choosing not to seek health care through modern medical means ▲ Can triangulate the data with household survey	▲ Difficult to monetize in-kind payments/gifts ▲ Recall period of traditional healer will be short, unless healer keeps records ▲ May be difficult to capture HIV/AIDS information on this survey; will need to rely on WHO surveillance definition

In addition to expenditure information, traditional healer surveys provide information on techniques traditionally used at the community level to improve or treat HIV/AIDS-related conditions. One important limitation to this survey is the sensitivity, i.e., the proportion of AIDS cases correctly identified - in this type of survey. When HIV/AIDS positive individuals are defined by symptoms using local terminology, the validity of the diagnosis used by traditional healers could present a significant degree of error. Moreover, information collected is more likely to be related to patients in the symptomatic phase of the HIV disease (AIDS and Stage 3) as a result of such community- and symptomatic-based approaches.

5.4.2 Data on Donors

Data on donors may be obtained from annual reports, particularly in the case of countries where donor coordination committees and sector-wide approach (Swap) programs are being implemented. Such reports provide good and regular information on the country context and list the key players in the health sector. Nevertheless a small survey of the major donors in a country may still be warranted; again, these may be ongoing as part of the general NHA effort. The survey data will provide additional information – on in-kind donations, contributions to the government versus those given directly to providers (this information may not be available from donor reports through the SWAp mechanism), etc. The limitations of donor surveys is a general reluctance among donors to provide information such as salaries of foreign personnel.

Table 11: Strengths and Weaknesses of Donor Surveys

Strengths	Weaknesses
▲ Can get specific information on health expenditures, and HIV/AIDS program expenditures in particular ▲ Can obtain in-kind donation information ▲ Can distinguish between funds given to the government versus those given directly to the providers	▲ Discrepancy in amounts of donor disbursements to ministries, as reported by donors and by recipient ministries ▲ Reluctance of donors to respond due to a desire not to disclose costs of foreign staff, overhead, etc. (which may be seen by the government as being extraordinarily high)

5.4.3 Data on Nongovernmental Organizations

NGOs operate in the HIV/AIDS field through a wide range of activities such as social support, HIV prevention programs, provision of HIV-related care, antiretroviral pilot programs, and home-based care programs. Obtaining data and records from NGOs is usually difficult, particularly since they may be numerous and difficult to sample. Generally speaking, a survey is warranted (and may be already underway as part of the general NHA exercise) particularly for those NGOs that work nationally across a country and thus would have significant health expenditure (as opposed to small NGOs limited to certain rural areas). Again, due to the triangulation approach of NHA, data on NGOs may be obtained from analyzing the records of financing sources (donor surveys, government records, etc.).

5.4.4 Data on Government Entities

For government data, particularly at the central level, a lot of information can be readily obtained from government records. Of course, government records do not necessarily track expenditures according to NHA classifications. Every effort must be made to understand the definitions and boundaries used in government classifications and to map these to NHA terms used in HIV/AIDS subanalysis. Also, government information may not be disaggregated to the level (e.g., may not have line items on HIV/AIDS-specific services) desired in the subanalysis' tables. In such cases, the NHA team will need to collect data not only on expenditures but also on unit cost, utilization of services, and other indicators that will allow for estimates to be made to distribute funds according to the NHA breakdown.

Government spending on the national AIDS program will be relatively straightforward. When a multisectoral strategy is adopted, a large pool of government resources is shared among various ministries. When government spending related to HIV/AIDS work is in other sectors (for instance, under the education budget or others) tracking expenditures will require more in-depth analysis.

Public records are generally produced on a yearly basis.

Table 12: Strengths and Weaknesses of Government Records

Examples of Government Records	Strengths	Weaknesses
▲ Budget expenditures (executed budgets) ▲ Economic census data ▲ Tax reports ▲ Import and export records	▲ Most accessible type of data ▲ Reliable and accurate ▲ Comprehensive in coverage of relevant activity ▲ Available on regular basis ▲ Consistent reporting rules	▲ May be distorted to misrepresent/ protect/advance a program ▲ May be disaggregated in a manner that differs from NHA categories ▲ Discrepancies between audited and unaudited records ▲ Tend to have a time lag (due to bureaucratic process of auditing)

The NHA team may also be able to glean valuable health expenditure information from other public records, as outlined in Table 13.

Table 13: Strengths and Weaknesses of Public Records.

Examples of Other Public Records	Strengths	Weaknesses
▲ Government task force reports (special documents) ▲ Academic studies ▲ NGO reports and studies ▲ Donor country reports ▲ Public insurance (social security)	▲ Very rich in details on specific issues	▲ Limited geographic or demographic scope. ▲ Variable analytic rigor ▲ Expenditure categories may not match the needs of the health accounts

5.4.5 Data on Insurance Companies

Insurance company data usually necessitates primary data collection (which may already be occurring as part of the general NHA exercise). Private insurance companies in particular may be unwilling to share what may be considered proprietary information. Thus, it is critical to bring the major insurance companies onto the NHA steering committee to communicate the purpose and value of NHA to the country and also to the companies themselves.

Table 14: Strengths and Weaknesses of Insurance Surveys

Strengths	Weaknesses
▲ Restricted to health care and related expenditures	▲ May not have the functional detail health accounts is looking for
▲ Limited availability (only at the end of the fiscal year)	▲ Likely to exclude patient payments in terms of co pays and deductibles
	▲ No central information system and difficult to pursue every single insurance provider in a country
	▲ Unwillingness to share at least some proprietary information, such as Profit-loss ratios

5.4.6 Data on Firms and Employers

The involvement of employers in HIV/AIDS-related health care activities varies with the size of the company and the geographical area covered. In high-prevalence regions such as sub-Saharan Africa, the devastating impact of HIV/AIDS on industry has led to an expanding effort on the part of the business sector to mitigate the epidemic. In workplace programs, the range of HIV/AIDS-related activities cover prevention and education, access to VCT, support, and treatment. Currently, a limited number of big firms are providing antiretroviral drugs to their employees and dependents through company clinics or in partnership with other providers. The NHA team will appraise the degree and nature of business involvement with the HIV/AIDS issue and inquire for existing data or reports on workplace programs.

Generally speaking, if the government does not have any routine surveys of employers, a specific NHA survey to obtain this information is needed.

One difficulty that many developing countries face is how to develop a sampling frame of firms because of a lack of knowledge of the "universe" of firms, which is especially relevant in an environment of high firm turnover. On the other hand, if it is estimated that firms play a small role in HIV/AIDS health spending, then an extensive effort is not required to obtain their health financing data.

5.5 Conclusion

The data collection approach recommended in these guidelines is one that is flexible and assesses first the types of ongoing surveys and available secondary data to which NHA data may be obtained. Remaining expenditure information gaps can be collected through surveys. In general, at a minimum, a PLWHA survey is conducted; this accounts for the main financial cost of an HIV/AIDS subanalysis. If the subanalysis is done concurrently with a general NHA (as is recommended), the remaining data may be obtained by simply by "piggy-backing" onto ongoing general NHA surveys that target many of the same entities as those needed for the HIV/AIDS subanalysis.

6. Planning the NHA HIV/AIDS Process

This unit begins with a brief description of NHA's value as a tool for making decisions on HIV/AIDS health resource allocation. It continues with a discussion of the importance of health care stakeholders and their role in the NHA process. Thereafter, the timeframe for completion of a NHA HIV/AIDS estimate as well as institutionalization of NHA are discussed.

6.1 Using NHA to Make Policy

NHA is a tool to provide health financing information. Its findings help policymakers to identify and prioritize health care objectives and constraints, and it provides for evidence-based decision making and MOH stewardship of the policy process. By illustrating the flow of all health care funds – public, private, and donor, either for the nation as a whole, or, in the case of the HIV/AIDS subanalysis, for that disease – it shows not only what was spent but also what types of services the population purchased and patterns of spending.

Identifying policy objectives at the outset of the NHA process will help direct the analytical process and allow for the estimation to be tailored so as to deliver policy relevant results.

6.2 Involving Stakeholders

Stakeholders are more likely to support and use NHA if they see its value to their work. For NHA to gain credence and popularity as a policy tool, a broad range of stakeholders need to be involved in the NHA process. The level of their participation can vary from simply being kept informed of their country's NHA progress, to regular consultations with them, or to a formalized role such as service on the NHA Steering Committee.

Identification and involvement of relevant stakeholders from the earlier stage of the NHA process is important for several reasons. Understanding of NHA will win stakeholder support of, rather than resistance to, the new methodology. Some stakeholders may need to be convinced that the data they supply to the NHA team will not be used against them (for example, for tax purposes) but rather be used in an analysis that will provide them useful information.

In addition to support, stakeholders can provide insight into their subsectors and help identify policy questions of importance to the country and for which NHA needs to provide information. Their cooperation will likely facilitate NHA collection of data over which the stakeholders have ownership, adoption of policies based on NHA findings, and implementation of those policy decisions.

Identifying stakeholders involves more than just describing the main actors in the health sector and their interest in NHA. It includes assessing health data ownership to ensure that NHA captures all needed data about financing sources, financing agents, providers, and functions. Specific attention should be given to the National Population Office, National Statistical Office, and local universities. For the NHA HIV/AIDS subanalysis, the country's HIV/AIDS Control Program in charge of

surveillance data collection, "watch-post" institutions that gather surveillance and other data, and other programs and organizations working on HIV/AIDS-related issues also must be involved.

Many countries are familiar with HIV/AIDS-related surveys through census, population-based surveys, or other instruments. Stakeholder sample sets and sampling expertise will be highly valuable to the NHA team when available – they will ultimately provide representative sampling for the design and implementation of NHA surveys and build a foundation upon which more data will be collected on a permanent basis. Building on existing data sets or piggybacking on existing population-based surveys can save time and money for the NHA subanalysis.

Examples of HIV/AIDS stakeholders include the following:

- National Population Office, National Statistical Office, HIV/AIDS Control Program – to identify local expertise in national surveys
- PLWHA support groups – to gain accurate information on health spending patterns
- Insurance companies – to distinguish the price of different services offered to HIV/AIDS patients as well as financial information. Investing time in educating insurance companies on the need for their data can allow NHA to precisely capture this source of information.
- Physicians in private practice – to access additional financing information. The physicians may be reluctant to share this information; their collaboration can be gained by including the president of the private physician association in the NHA steering committee.

Other entities – import and custom offices that own data on pharmaceuticals that NHA needs when information collected from pharmacies is incomplete, and AIDS councils and associations and other private HIV/AIDS organizations – also are potential sources of data.

6.3 Setting Up the NHA Steering Committee and NHA Technical Team

The implementation of the NHA process requires two teams, the NHA Steering Committee, which has a policy orientation, and the NHA technical team, which implements the NHA exercise.

The NHA Steering Committee oversees the NHA process and provides guidance to ensure that relevant policy issues are addressed. It is recommended that the committee be headed by a high-ranking representative of the MoH, for example, the director of finance or even the secretary general. Members include representatives of key stakeholder organizations, such as the MoF, donors, the central bank, and private provider organizations. If the country is carrying out a NHA subanalysis on HIV/AIDS or tuberculosis, then these subsectors need to be represented on the committee. The committee interfaces with policymakers, to decide on policy needs that may orient the focus of the NHA and to present findings of the NHA team, and with the technical team, to ensure that the NHA team focuses on the identified policy issues. The committee may decide to monitor the process closely and receive monthly feedback about technical team progress. Briefly, the responsibilities of the NHA Steering Committee are the following:

- Identify policy priorities
- Meet regularly with stakeholders to discuss issues and preliminary findings

- Assist the technical team in the NHA process and interpretation of findings
- Organize meetings and workshops with all stakeholders in order to disseminate preliminary and final NHA findings
- Propose an action plan to implement NHA recommendations
- Provide support to the NHA team and process in the event of bureaucratic hindrances

The NHA technical team designs and implements the NHA data collection and analysis process, and reports findings and constraints encountered to the NHA Steering Committee. The team is composed of health financing analysts and experts on data collection and data entry. Often, team members are from the public sector; however, the team may be strengthened by adding a private consultant who has auditing experience in the private and public health sector and, therefore, access to data. For an HIV/AIDS subanalysis, it may be necessary to educate the team members on specific HIV/AIDS issues and sources of specific financial data. Responsibilities of the NHA technical team are the following:

- Describe the health system and its market structure, and key issues to be addressed in the NHA subanalysis
- Identify each stakeholder/entity among financing sources, financing agents, and users/providers in the public and private health sectors
- Set up an inventory of existing primary and secondary data sources
- Define and implement for each entity the data collection process
- Validate, enter, and analyze financial data
- Report regularly to the NHA Steering Committee, including preliminary findings and constraints encountered in NHA implementation
- Write the final report
- Present the final report to the NHA Steering Committee.

To engage and maintain the cooperation of the broad universe of NHA stakeholders, the NHA Steering Committee and technical team need to regularly inform the stakeholders about the NHA process and address their concerns and questions. This can be done in workshop settings, organized by the NHA Steering Committee. The NHA team may want to present a first-draft NHA estimation based on preliminary or secondary data, such as the public expenditure review. This preview will provide to stakeholders a better understanding of the end-product and make them more willing to share detailed financial information with the NHA technical team.

6.4 Timeliness

The NHA process should be completed while the data and findings are still relevant to the policy process. It is possible to implement a first NHA process within one year, depending on data availability and stakeholder collaboration, but it requires setting and meeting deadlines. Unexpected

constraints may delay progress. For example, the data collection team may find that some entities do have data as expected, available data are not adequately detailed, or data are otherwise invalid. A second round of data collection may be needed, starting with the task of identifying additional data sources. The Steering Committee may be able to assist the team to circumvent such constraints and identify alternative solutions.

Table 15 is an overview of NHA activities and the estimated time needed to finish the tasks. Depending on a country's data situation, activities and timeframes may differ.

Table 15: Estimated Timeframe for NHA HIV/AIDS Subanalysis

Activity/Month	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Form NHA Steering Committee with HIV/AIDS stakeholder identified												
Form NHA technical team												
Describe health sector												
Identify all HIV/AIDS entities												
Organize first NHA training workshop with HIV/AIDS subanalysis component												
Describe data storage for each entity												
Set up matrices												
Develop and pretest data collection tools including HIV/AIDS specific surveys												
Collect and validate data												
Enter data												
Analyze data												
Present preliminary results during second workshop w/ stakeholders												
Write NHA report												
Present final results to all stakeholders												
Follow up on recommendations												
Get feedback from stakeholders												

6.5 Institutionalizing NHA

Ideally, institutionalization occurs when NHA is conducted on an annual or regular basis that is supported both politically and financially by the country government. Use of NHA data on a recurrent basis for making health policy decisions is essential for government ownership.

Institutionalization requires an ongoing technical team to work on NHA and respond promptly to requests from policymakers and other stakeholders. The small number of trained accountants and health financing analysts available at many MoHs tends to hinder the institutionalization of an NHA technical team within the ministry and highlights the need for additional capacity building in health care financing. To overcome this weakness in the short term, countries may locate the NHA team within an existing statistical unit at the Ministry of Finance, or create a new unit within the MoH, but with representatives from several ministries.

Annex A. World Health Organization Clinical AIDS Case Definition for Use in Africa

The WHO clinical AIDS definition has been widely used for surveillance purpose in countries facing problem in providing HIV testing. An individual will be considered to have AIDS when he/she exhibits at least two major signs, and one minor sign in the absence of known causes of immunosuppression. When generalized Kaposi's sarcoma or cryptococcal meningitis is recorded, a diagnosis of AIDS can be reported without the presence of other signs.

- **Major signs**
  - Weight loss > 10% body weight
  - Chronic diarrhea > 1 month
  - Prolonged fever > 1 month (intermittent or constant)
- **Minor signs**
  - Persistent cough > 1 month
  - Generalized purity dermatitis
  - Recurrent herpes zoster
  - Oral candidiasis
  - Chronic progressive and disseminated herpes simplex infection

Source: HIV InSite Knowledge Base Chapter, June 1998

Annex B. NHA Subanalysis for HIV/AIDS: Function Classification

An illustrative classification scheme for HIV/AIDS is presented below. This scheme adapted from the International Classification of Health Accounts, is based on wide consultation with key HIV/AIDS experts in East, Central, and Southern African countries and in the Latin America and Caribbean region. The integrity and content of the original ICHA classifications have been maintained, meaning that no classifications have been replaced; instead, the subcomponents for HIV/AIDS and TB have been placed into the existing ICHA framework (new categories are in italics).[10] Individual country NHA teams are encouraged to adapt the classification scheme below to individual country needs and situations.

HIV/AIDS Functions

HC.1-7 Direct health care functions
HC.1 Services of curative care[11]
HC.1.3 Outpatient curative care
HC.1.1 Inpatient curative care
HC.1.3.5 STI management
HC.1.3.6 OI treatment and monitoring[12]
HC.1.3.7 ARV treatment
HC.1.3.8 Psychosocial support
HC.1.4 Services of curative home care

HC.3 Services for long-term nursing care
HC.3.1 Inpatient long-term nursing care *(incl. hospices)*
HC.3.3 Long-term nursing care: home care

HC.4 Ancillary services to medical care
HC.4.1 Clinical laboratory
HC.4.2 Diagnostic imagingHC.4.3 Patient transport & emergency rescue

HC.5 Medical goods dispensed to outpatients
HC.5.1 Pharmaceuticals and other medical non-durables
HC.5.1.1 Prescribed medicines

[10] The highest-level ICHA classification (first two numbers of the code) cannot be replaced or changed. Instead, classifications can be modified or added in the subcategories of the classifications.
[11] The term "curative" is used by the ICHA. For the HIV/AIDS subanalysis, the term is often replaced by "treatment" because there is no existing medical cure for HIV/AIDS.
[12] The distribution of OIs varies by country. The classification scheme developed by individual countries doing a subanalysis will need to take into account the specific services associated with treatment of the major OI (e.g., TB).

HC.5.1.1.1 *ARV drugs*
HC.5.1.1.2 *OI drugs*
HC. 5.1.3 Other medical non-durables
HC.5.1.3.1 *Condoms*

HC.6 Prevention and public health ServicesHC.6.1 MCH; FP and counseling
HC.6.1.1 *PMTCT*
HC.6.3 Prevention of communicable diseases
HC.6.3.1 *Voluntary counseling & testing (VCT)*
HC.6.3.2 *Blood safety*
HC.6.3.3 *Post exposure prophylaxis (PEP)*
HC.6.3.4 *Info., educ., Communic. prog (IEC)*
HC.6.3.5 *STI prevention program*
HC.6.3.6 *Needle Programs (for prevention or exchange)*
HC.6.3.7 *Condom distribution programs*
HC.6.4 Vaccination and immunization

HC.7 Health admin. & health insurance[13]
HC.7.1 General government administration of health
HC.7.1.1 General government administration of health (except social security)
HC.7.1.2 Administration, operation and support of social security funds
HC.7.2 Health administration and health insurance: private
HC.7.2.1 Health administration and health insurance: social insurance
HC.7.2.2 Health administration and health insurance: other private

HC.R.1-5 Health-related functions

HCR.1 Capital formation for h. c. provider institutions

HCR.2 Education and training
HCR.3 Research and development in health

HCR.4 Food, hygiene and drinking water control (*incl. nutritional support)*

HCR.5 Environmental health
AD.1-4 *Addendum functions*

AD.1 *Mitigation*
AD.1.1 *Social support services*
AD.1.1.1 *Support to widows*
AD.1.1.2 *In-kind benefits to PLWHA*
AD.1.1.3 *Psychosocial support to families*
AD.1.2 *Non-health services to orphans and vulnerable children*
AD.1.2.1 *School fees (AIDS orphans)*
AD.1.2.2 *Psychosocial support to orphans and vulnerable children*

[13] For central level expenditures only

AD.1.2.3 *Grants to families taking care of orphans and vulnerable children*

AD.2 *Policy advocacy*
(Includes support to national strategic plan for HIV/AIDS (lobbying))

AD.3 *Non-health IEC*
(Includes social stigma reduction campaigns)

AD.4 *Empowerment and organization*
(Includes legal services)

HIV/AIDS Providers

HP.1 Hospitals
- HP1.1 General hospitals
  - *HP.1.1.1 Public hospital*
  - *HP.1.1.2 Private hospital*
    - *HP.1.1.2.1 Private for-profit hospital*
    - *HP.1.1.2.2 Private non-profit hospital (NGO/Church-owned hospital)*
- HP.1.2 Mental health and substance abuse hospitals
- HP.1.3 Specialty (other than mental health and sub. abuse) hospitals
  - *HP.1.3.1 University hospital*
  - *HP.1.3.2 Teaching hospital*
  - *HP.1.3.3 Maternity*

HP.2 Nursing and residential care facilities
- HP.2.9 All other residential care facilities
  - *HP.2.9.1 Hospice*

HP.3 Providers of ambulatory health care
- HP.3.1 Offices of physicians
- HP.3.4 Outpatient care centers
  - HP.3.4.1 FP centers
  - HP.3.4.5 All other outpatient multi-specialty and coop. service centers
  - *HP.3.4.5.1 HIV/AIDS clinics*
    - *HP.3.4.5.2 STI clinics*
    - *HP.3.4.5.3 VCT centers*
    - *HP.3.4.5.4 Antenatal clinics*
- HP.3.5 Medical and diagnostic labs
- HP.3.6 Providers of home health care services
- HP.3.9 Other providers of ambulatory care
  - *HP.3.9.2 Blood banks*
  - *HP.3.9.3 Alternative or traditional practitioners*
    - *HP.3.9.3.1 Volunteer community health worker*

HP. 4 Retail sale of other providers of medical goods
HP.4.1 Dispensing chemists/pharmacies

HP.5 Provision & admin of public health programs

HP.6 General health admin and insurance
HP.7 All other industries (rest of economy)[14]
HP.7.2 Private households as providers of home care

HIV/AIDS Financing Agents

HF.A Public sector
HF.1.1 Territorial government
HF.1.1.1 Central government
HF.1.1.1.1 MoH
HF.1.1.1.2 AIDS programs/councils outside the MoH
HF.1.1.1.3 Other ministries

HF.1.2 Social security funds
HF.2.1.1 Government employee insurance programmes
HF.2.5.1 Parastatal companies

HF.B Nonpublic Sector
HF.2.1.2 *Private employer insurance programmes*

HF.2.2 Private insurance enterprises (other than social insurance)

HF.2.3 Private Households' out-of-pocket payment

HF.2.4 Non-profit institutions serving households

HF.2.5 *Private nonparastatal firms and corporations (other than health insurance)*

HF.3 Rest of the world

HIV/AIDS Financing Sources

FS.1 Public funds
FS.1.1 Territorial government funds
FS.1.1.1 Central government revenue
FS.1.1.2 Regional and municipal government revenue

[14] These expenses are difficult to capture but are relevant for conceptualizing the full range of services and health expenditures relating to HIV/AIDS.

FS.2 Private funds

FS.2.1 Employer funds

FS.2.2 HH funds

FS.2.3 Non-profit institutions serving individuals

FS2.4 Other private funds

FS.3 Rest of the world funds

Annex C. NHA Subanalysis for HIV/AIDS: Function Classification Glossary

The definitions used in the HIV/AIDS function classification glossary are extracted from the list of key definitions for HIV/AIDS programming in the health sector compiled by WHO (2003) and UNAIDS (2003) as well as the UNAIDS glossary for HIV/AIDS related terms (2003). The definitions have been adapted for the purpose of the NHA subanalysis for HIV/AIDS Function Classifications. Certain items or activities usually associated with the entity being defined are noted as "included" or "excluded" for the purposes of NHA HIV/AIDS classifications.

ARV treatment

Antiretroviral (ARV) treatment includes all specialized medical and diagnostics services provided to outpatients to properly manage and monitor treatment of drugs that aim at suppressing HIV replication and improve HIV-related symptoms (UNAIDS).

Includes:

- ARV drugs delivered for treatment purposes, such as highly antiretroviral therapy (HAART) that requires the simultaneous use of three or four ARV drugs, or other regimen of ARVs in use in the country.
- Laboratory tests necessary for treatment monitoring

Excludes:

- The use of ARV drugs to prevent HIV transmission such as prevention of mother-to-child transmission (PMTCT) or post exposure prophylaxis (PEP)
- HIV counseling and testing, follow-up counseling services to ensure psychosocial support and adherence to treatment
- Management of OIs and other HIV-related illnesses

Blood safety

Blood safety covers the public health services ensuring the provision of safe, adequate and quality blood and blood products for all patients requiring transfusion (WHO). Blood safety includes but is not limited to blood screening. It covers a wide range of health care services such as donor promotion (education, recruitment, and retention of donors).

Condom distribution program

Condom distribution program covers a range of activities to promote the adoption of policies and strategies aiming at increasing the acceptability, availability, and use of condoms (WHO).

Includes: Activities that increase access to condoms, such as distribution or social marketing.

Excludes: Education programs to promote condom use.

Drugs (antiretroviral)

ARV drugs destroy a virus or suppress its replication (WHO). As it relates to HIV disease, ARV drugs refer to ARV pharmaceuticals that aim at suppressing HIV replication.

Drugs (for opportunistic infection)

Opportunistic infection drugs are used to prevent (prophylaxis) and treat OIs.

Harm reduction program to injecting drug users

Regarding drug injections, HIV harm reduction programs cover a wide range of health care services that aim at preventing HIV transmission through sharing of non-sterile injection equipment and drug preparations (WHO).

Includes:

- Needle exchange program
- Drug substitution treatment

Excludes:

- Information, education, and communication (IEC) on HIV transmission through injecting drug use

Home care

Home care comprises those services (including palliative services) provided at home. The System of Health Accounts manual does not state whether or not this can be provided by a family member or external provider. The SHA refers to traditional medical providers and, therefore, would not necessarily include non-traditional providers such as a family caregiver.

Information education program

Information education programs covers health services of health education that enable families, groups, organizations, and communities to play an active role in achieving, protecting, and sustaining

their own health (WHO). HIV/AIDS-related information and education programs could be communicated through many channels.

Includes:

- Interpersonal communication (community meetings, groups discussion)
- Mass media communication: Radio, television or "one-way" communication support (brochures, poster and others)

Excludes:

- VCT counseling sessions
- Psychological support

Inpatient long-term nursing care (including hospice)

Inpatient long-term nursing care is assistance on a continuing basis due to chronic impairments and a reduced degree of independence and activities of daily living. These services are provided in institutions or community facilities. Long-term care is typically a mix of medical and social services, but only health care services are captured by NHA.

Opportunistic infection treatment and monitoring

OI treatment and monitoring includes all specialized medical and diagnostic services provided to outpatients to (1) treat an episode of OI or (2) deliver OI prophylaxis drugs. OIs are defined as illnesses caused by organisms, that usually do not cause disease in persons with healthy immune systems. Persons living with advanced HIV infection suffer OIs of the lungs, brain, eyes, and other organs.

Includes: OIs common in persons diagnosed with AIDS include Pneumocystis carinii pneumonia; Kaposi's sarcoma; cryptosporidiosis; histoplasmosis; other parasitic, viral and fungal infections; and some types of cancers.

Excludes: Other HIV-related illnesses

Prevention of mother-to-child transmission (PMTCT)

PMTCT usually covers a range of health care services including but not limited to the prevention of HIV transmission from HIV-infected women to their infants through the provision of ARV drugs to HIV-infected pregnant women and their infants after birth.

Excludes: For NHA HIV/AIDS functions classifications, activities integrated into PMTCT services such as VCT and STI management, are not captured under PMTCT services. Specific attention should be given not to double-count those activities under PMTCT.

Post exposure prophylaxis (PEP)

Post exposure prophylaxis covers the provision of health care services to reduce the likelihood of HIV infection after potential exposure, either occupationally or through sexual intercourse (WHO).

Includes:

- Short course of ARV drugs
- Paramedical exams necessary to test sources for HIV
- Appropriate counseling

Psychosocial support

Psychosocial support includes all non-medical services provided to out patients to ensure the ongoing psychological and social problems of HIV-infected individuals, and their partners, families and caregivers.

Includes: For NHA HIV/AIDS classifications, the following activities are included:

- Mental health and supportive services available at facility level or community level
- Follow-up counseling services to ensure psychosocial support and adherence to ARV treatment
- In high HIV prevalence areas, activities provided to nurses, physicians, and other health care related personnel to cope with emotional stress due to provision of care to a large number of HIV/AIDS cases (WHO).

Excludes: For NHA HIV/AIDS classifications, counseling services for VCT are not included as direct health expenditures. Counseling for VCT helps to make a decision on whether or not to be tested and provides support when receiving the test result (WHO).

STI management

STI management includes all specialized medical and diagnostics services provided to outpatients during an episode of infection spread by the transfer of organisms from one person to another during sexual contact. As ulcerative STIs are known to be a co-factor in HIV transmission, STI management is a key area in the HIV/AIDS response (UNAIDS). Other than HIV, the most common STIs are syphilis; gonorrhoea; chlamydia trachomatis; human papilloma virus (HPV); genital herpes; chancroid; genital mycoplasmas; hepatitis B; trichomoniasis; enteric infections; and ectoparasitic diseases (UNAIDS).

Includes: This item includes secondary prevention services only. Secondary prevention aims at detecting and treating infected people through screening programs and treatment of infected people.

Excludes: For NHA classification purposes, this item does not include:

- Primary prevention such as health education
- HIV-related treatment

STI prevention program

STI prevention is mainly (1) primary prevention that seeks to reduce the acquisition of infection and (2) secondary prevention that aims at detecting and treating cases. This item should focus on primary prevention only (STI management is captured under HC.1.3.5).

Voluntary counseling and testing (VCT)

VCT covers the provision of health services by which an individual undergoes counseling to enable him/her to make an informed choice about being tested for HIV (UNAIDS). Various models of VCT services are freestanding, integrated into other services, and outreach.

Includes: The following activities are included:

- Paramedical services and laboratory tests needed to analyze for the presence of antibodies or antigens produced in response to HIV (WHO)
- The provision of HIV/AIDS-related information, pretest-counseling, post-test counseling, and referral to treatment services
- For NHA HIV/AIDS function classifications, specific attention should be given not to double-count VCT when integrated into other services.

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